Conference Systems

Databook - June 2014

Latin America

BOSCH

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Conference Systems

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Sistemas completos de audio para brindar agilidad y mayor productividad a toda clase de reuniones, conferencias o discusiones en donde exista interacción entre varios participantes. Numerosas aplicaciones son posibles con los Sistemas de Conferencias y Congresos de Bosch.

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For over 125 years, the Bosch name has stood for quality and reliability.

Thanks to its continuous investment in research and development of new technologies, Bosch generated 14 patents per working day, allowing you maintain the excellent performance of its products.

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Por más de 125 años, el nombre Bosch ha representado calidad y confiabilidad.

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Bosch, la mejor solución en seguridad para cada aplicación.

Tradição de Qualidade e Inovação

Há mais de 125 anos o nome Bosch representa qualidade e confiabilidade.

O constante foco e investimentos em pesquisa e desenvolvimento de novas tecnologias proporcionam à Bosch gerar 15 patentes por dia de trabalho, o que permite manter o excelente desempenho de seus produtos.

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Bosch, soluções integradas de sistemas eletrônicos de segurança e comunicação.

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DCN multimedia Conference System

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DCN multimedia Multimedia Device

Features

- 7" capacitive touchscreen
- Unobtrusive pluggable microphone
- Built-in two-way loudspeaker
- Video, meeting content and internet access
- Add functionality via software and 3rd party/ custom apps

The Multimedia Device is essential for local and regional councils and is ideal when multimedia content is required. The multimedia device is easily plugged into, or removed from, the system using the system network cabling, which enables the system to be set up quickly and efficiently.
The multimedia device can be free-standing or fixed to the table using mounting screws.
The multimedia device can be remotely configured as chairperson or participant seat and has a remote switch off function for energy saving. It has perfect audio quality and a pluggable microphone (to be ordered separately).
Multimedia devices can be connected in a simple daisy-chain configuration. Alternatively, the devices can be connected in star configuration where each device is connected to a Power over Ethernet compatible switch with an individual standard CAT-5e (or better) cable.
The connectors are at the bottom of the devices, ensuring a neat and clean system installation.

Functions

Controls and indicators

- Full color 7” capacitive-touch graphical display including:
  - Agenda and meeting data browsing.
  - Internet browsing.
  - Live video (e.g. showing the current speaker).
  - Meeting management for the chair person.
  - Headphones volume control.
  - Possibility for adding 3rd party android app.
  - Functionality can be increased by adding software.
- Document retrieval:
  - MSWord (.doc, .docx).
  - Excel (.xls, .xlsx).
  - PowerPoint (.ppt, .pptx, .pps, .ppsx).
  - Portable Document Format (.pdf).
  - Rich Text Format (.rtf).
  - Plain text (.txt).
- Images codecs:
  - .jpg.
  - .gif.
  - .png.
  - .bmp.
  - .webp.
- Audio codecs:
  - AAC (.aac,.3gp, .mp4, .m4a, .ts).
  - Flac (.flac).
  - Mp3 (.mp3).
  - Midi (.mid).
  - Vorbis (.ogg).
  - PCM (.wav).
- Video codecs
  - H263 (.3gp, .mp4).
  - H264 (.3gp, .mp4).
  - MPEG4 (.3gp).
  - vp8 (.webm).
- Pluggable microphone.
- Built-in 3M pixel camera for future use.
- Built-in two-way loudspeaker.
- Microphone on/off button or request-to-speak button.
- Microphone mute or chairperson priority button.
- Indicators showing: microphone on state, request-to-speak and possible-to-speak.
- Two-way speaker system.

Interconnections

- Socket for pluggable microphone.
- 2x RJ45 compatible connection for system communication and power.
- 3.5 mm stereo jack for headphones, external microphone or headset microphone.
- Hot plug-and-play.
- Provision to attach a magnetic name card holder.

Certifications and approvals

Region	Certification
Europe	CE

Parts included

Quantity	Components
1	DCNM-MMD DCN multimedia Multimedia Device

Technical specifications

General

Screen size	7 inch, 1024 x 600 pixels
Screen type	Capacitive multi touch
Operating system	Android 4.03

1

Electrical

Supply voltage	48 Vdc IEEE 802.3 at Type 2
Power consumption	12.5 W
Frequency response	100 Hz – 20 kHz (-3 dB at nominal level)
THD at nominal level	< 0.01 %
Dynamic range	96 dB (14-110 dBSPL)
Signal-to-noise ratio	66 dB with respect to nominal level headroom 30 dB

Audio inputs

Nominal microphone input	80 dB according IEC60914
Maximum microphone input	110 dB according IEC60914
External microphone nominal input	-38 dBV
External microphone maximum input	-25 dBV

Audio outputs

Loudspeaker nominal output	72 dB SPL @ 0.5 m
Loudspeaker maximum output	90 dB SPL
Headphone nominal output	-3 dBV
Headphone maximum output	0 dBV

Mechanical

Mounting	Tabletop
Dimensions (H x W x D)	75 x 312 x 175 mm (2.95 X 12.28 x 6.89 in)
Weight	1.85 kg (4.078 lb)
Color	Traffic black RAL 9017 Pearl light grey RAL 9022

Environmental

Operating temperature	0 ºC to +35 ºC (32 ºF to +113 ºF)
Storage temperature	-20 ºC to +70 ºC (-4 ºF to +158 ºF)
Relative humidity	< 95 %, > 5%

Ordering information

DCN multimedia Multimedia Device
Multimedia conference device with capacitive touch screen. Microphone and cable to be ordered separately.
Order number **DCNM-MMD**

Accessories

DCN multimedia High Directive Microphone
Microphone for the DCN multimedia - Multimedia Device.
Order number **DCNM-HDMIC**

DCN multimedia Name Card Holder (25pcs)
Name Card Holder for attaching to the rear side of the DCN multimedia Multimedia Device (DCNM-MMD).
Order number **DCNM-NCH**

DCN multimedia High Directive Microphone

Features

- Discrete microphone for user convenience
- High directive response
- Low susceptible for mobile phones
- Ultra low noise
- Freedom of movement

The innovative, stylish and ergonomically designed high directive microphone gives the user the possibility to view the meeting room without obstructions. The high directive microphone contains two precisely positioned capsules giving it a high directive response which makes it possible to have a larger speaking distance then normal even in noisy conditions. The microphone has low noise and low susceptibility to interference from mobile phones.

Functions

Controls and Indicators

- Red or green illuminator. Red indicates microphone active, green indicates request for speech accepted.

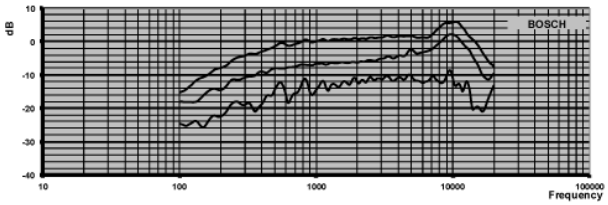
Interconnections

- Connector to plug and fasten the microphone.

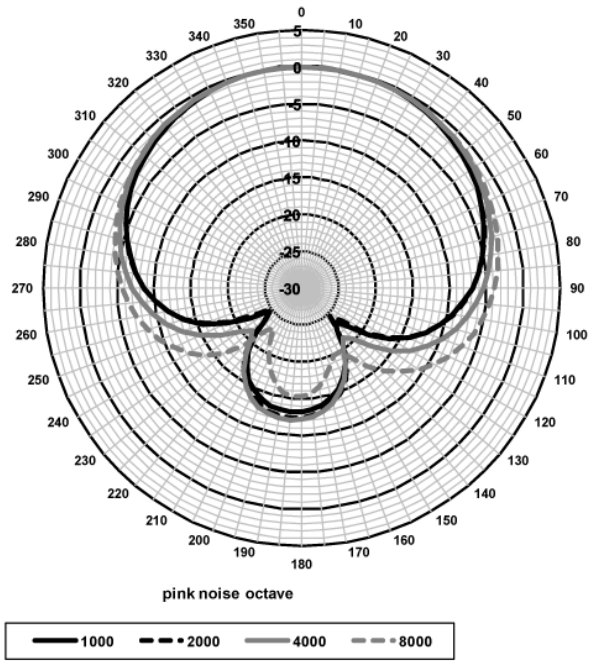
Certifications and approvals

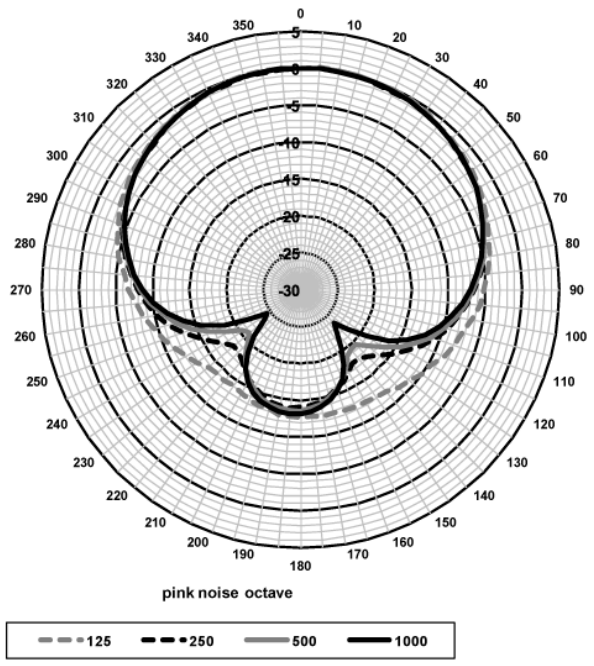
Region	Certification
Europe	CE

Installation/configuration notes



Frequency response (Opening angle: 0, 90 and 180 degrees)





Polar diagram (measured with pink noise)

1

Parts included

Quantity	Components
1	DCNM-HDMIC DCN multimedia High Directive Microphone

Technical specifications

Electrical

Bandwith	100 Hz – 15 kHz according IEC 60914
Dynamic range	> 96 dB

Mechanical

Dimensions (H x W x D)	108 x 21.5 x 60 mm (4.25 X 0.85 x 2.36 in)
Weight	0.035 kg (0.077 lb)
Color	Traffic black RAL 9017 Pearl light grey RAL 9022

Environmental

Operating temperature	0 ºC to +45 ºC (32 ºF to +113 ºF)
Storage temperature	-20 ºC to +70 ºC (-4 ºF to +158 ºF)
Relative humidity	< 95 %, > 5%

Ordering information

DCN multimedia High Directive Microphone
Microphone for the DCN multimedia - Multimedia Device.
Order number **DCNM-HDMIC**

DCN multimedia Name Card Holder (25pcs)

Features

- Easily positioned and removed by use of magnets
- Allows you to add your own custom made text

The Name Card Holder is attached to the rear side of the DCN multimedia Multimedia Device (DCNM-MMD). Two magnets on the top of the card allow it to be easily positioned and removed.
A custom made paper card can be easily slid into the name card holder.

Functions

A custom made paper card can be easily slid into the name card holder.
Examples of the paper card description are:

- The participant's name and photo.
- Your company name.
- Name of conference.

Parts included

Quantity	Components
1	DCN multimedia Name Card Holder (25 pieces)

Technical specifications

Mechanical

Dimensions (H x W x D)	60 x 182 x 23 mm (2.36 X 7.17 x 0.91 in)

Ordering information

DCN multimedia Name Card Holder (25pcs)
Name Card Holder for attaching to the rear side of the DCN multimedia Multimedia Device (DCNM-MMD).
Order number **DCNM-NCH**

1

DCN multimedia Anti-reflec. foil (25pcs)

Features

- All purpose protector for DCNM-MMD LCD screen
- Anti-glare, anti-scratch, anti-wear
- Easily positioned and replaced

The DCN multimedia anti-reflection foil is a self-absorbing glass screen protector, which has anti-glare, anti-scratch and anti-wear features. It protects the LCD screen of the Multimedia Device (DCNM-MMD) and prevents reflection from ceiling lights.

Parts included

Quantity	Components
1	DCN multimedia anti-reflection foil (25 pieces)

Ordering information

DCN multimedia Anti-reflec. foil (25pcs)
DCN multimedia anti-reflection foil for preventing unwanted reflection from ceiling lights and protecting the Multimedia Device (DCNM-MMD) LCD screen.
Order number **DCNM-MMDSP**

DCN multimedia Flight Case for 6 Multimedia Devices

Features

- Proven construction
- Equipment shaped foam interior
- Easy to pack, unpack and transport equipment
- Roller wheels for convenient transportation
- Cushion grip handles; trigger release latches

The Flight Case is used for storing and transporting DCN multimedia equipment. It has compartments for 6 multimedia devices, 6 high-directive microphones, and a compartment for cables.
The flight case is manufactured from proven material to ensure for adequate protection of your DCN multimedia equipment during transportation and storage. The handles and latches are recessed and protected. The shaped foam interior ensures for smooth and fast packing and unpacking of equipment. The flight case has a retractable handle and wheels for convenient ground transportation and to prevent unnecessary lifting.

Technical specifications

Mechanical

Dimensions (H x W x D)	318 x 801 x 529 mm (12.52 x 31.54 x 20.83 in)
Weight (without equipment)	11 kg (24.25 lb)
Color (case exterior)	Black

Ordering information

DCN multimedia Flight Case for 6 Multimedia Devices
DCN multimedia Flight Case for storing and transporting 6 multimedia devices, 6 high-directive microphones and cables.
Order number **DCNM-FCMMD**

1

DCN multimedia Audio Powering Switch

Features

- Zero network configuration
- Fully compatible to the Ethernet (IEEE802.3) and OMNEO standard
- Supports loop-through connection with cable redundancy
- Acoustic feedback suppression, echo cancellation and equalizer
- Standby mode to be environment friendly

The Audio Powering Switch is responsible for routing, controlling and processing the audio and supplies power to the multimedia devices.
It includes an intelligent adaptive acoustic feedback suppressor, echo cancellation and two 5-band parametric equalizers for optimal speech intelligibility. Next to that it has two audio inputs for inserting external analogue audio signals into the system and also mix-minus is provided for connecting the DCN multimedia system to (video) conferencing equipment.
The two audio outputs are used for mix-minus and to connect an external sound reinforcement system.
The built-in Ethernet switch connects all devices in the system together into a network, and supports loop-through connection which makes it possible to connect the multimedia device to another multimedia device and even the last multimedia device in the loop can be connected to create cable redundancy.
The audio powering switch has no user controls and can be fully remotely controlled.

Functions

Controls and Indicators

- Mains switch on the rear to power on the audio powering switch.
- Ground-lift switch.
- Led on the front to show: green (power on), amber (standby), blinking (no connection to the system).
- Led on the rear to show: green (power availability on each powered socket), red (overload per powered socket).
- Ethernet led's yellow and amber for each socket.
- Independent powered sockets; a short circuit on one socket does no influence the other sockets.
- Supports hot plug and play.

Interconnections

- 2 three-pole XLR balanced audio line inputs with galvanic separation
- 4 RCA unbalanced audio line inputs
- 2 three-pole XLR balanced audio line outputs with galvanic separation
- 4 RCA unbalanced audio line outputs
- Mains power supply auto ranging input.
- 1 socket with Ethernet without power, compatible with RJ45.
- 3 sockets with Ethernet with high power supply (144 W), compatible with RJ45.
- 1 socket with Ethernet with low power supply (15 W), compatible with RJ45.

Certifications and approvals

Region	Certification
Europe	CE

Parts included

Quantity	Components
1	DCNM-APS DCN multimedia Audio Powering Switch

Technical specifications

Electrical

Supply voltage	100-240 Vac 50-60 Hz
Power consumption	530 W
DCNM system supply	48 Vdc
Total power supply	3x 144 W + 15 W
Frequency response	30 Hz - 20 kHz
THD at nominal level	< 0.1 %
Dynamic range	> 95 dB
Signal-to-noise ratio	> 95 dB

Audio inputs

XLR nominal input	-18 dBV (+6 dB / -18 dB)
XLR maximum input	+18 dBV
Cinch nominal input	-30 dBV (+6 dB / -18 dB
Cinch maximum input	+6 dBV

Audio outputs

XLR nominal output	-18 dBV (+8 / -24 dB)
XLR maximum output	+20 dBV
Cinch nominal output	-30 dBV (+8 / -24 dB)
Cinch maximum output	+8 dBV

Mechanical

Mounting	Tabletop or mounted in a 19” rack
Dimensions (H x W x D)	
for tabletop use, with feet:	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19” rack use, with brackets:	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	7.62 kg (16.79 lbs)
Color	Traffic black RAL 9017 Pearl light grey RAL 9022

Environmental

Operating temperature	0 ºC to +45 ºC (-32 ºF to +113 ºF)
Storage temperature	-20 ºC to +70 ºC (-4 ºF to +158 ºF)
Relative humidity	< 96 %, > 5 %

Ordering information

DCN multimedia Audio Powering Switch
Switch for controlling and routing system audio including acoustic feedback suppression, echo cancelling and equalizing. Supplies power to DCN multimedia devices, built-in Ethernet switch. At least one DCNM-APS is needed per DCN multimedia system.
Order number **DCNM-APS**

1

DCN multimedia Powering Switch

Features

- Zero network configuration
- Fully compatible to the Ethernet (IEEE802.3) and OMNEO standard
- Supports loop-trough connection with cable redundancy
- Standby mode to be environment friendly

The Powering Switch is used in combination with an Audio Powering Switch to supply extra power to the DCN multimedia network. The built-in Ethernet switch connects all devices in the system together into a network and supports loop-trough connection, which makes it possible to connect the multimedia device to another multimedia device and even the last multimedia device in the loop can be connected to the (audio) powering switch to create cable redundancy.
The powering switch has no user controls and can be fully remotely controlled.

Functions

Controls and Indicators

- Mains switch on the rear to power on the audio powering switch.
- Led on the front to show: green (power on), amber (standby), blinking (no connection to the system).
- Led on the rear to show: green (power availability on each powered socket), red (overload per powered socket).
- Ethernet led's yellow and amber for each socket.
- Independent powered sockets; a short circuit on one socket does no influence the other sockets.
- Supports hot plug and play.

Interconnections

- Mains power supply auto ranging input.
- 1 socket with Ethernet without power, compatible with RJ45.
- 3 sockets with Ethernet with high power supply (144 W), compatible with RJ45.
- 1 socket with Ethernet with low power supply (15 W), compatible with RJ45.

Certifications and approvals

Region	Certification
Europe	CE

Parts included

Quantity	Components
1	DCNM-PS DCN multimedia Powering Switch

Technical specifications

Electrical

Supply voltage	100-240 Vac 50-60 Hz
Power consumption	530 W
DCNM system supply	48 Vdc
Total power supply	3x 144 W + 15 W

Mechanical

Mounting	Tabletop or mounted in a 19" rack
Dimensions (H x W x D)	
for tabletop use, with feet:	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19" rack use, with brackets:	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	7.4 kg (16.31 lbs)
Color	Traffic black RAL 9017 Pearl light grey RAL 9022

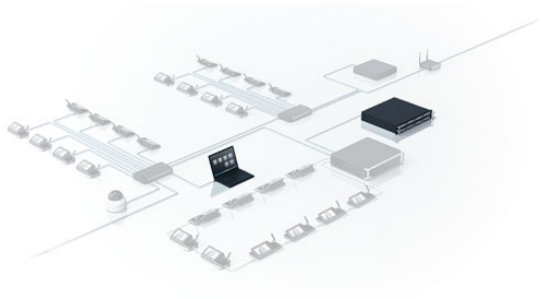
Environmental

Operating temperature	0 ºC to +45 ºC (-32 ºF to +113 ºF)
Storage temperature	-20 ºC to +70 ºC (-4 ºF to +158 ºF)
Relative humidity	< 96 %, > 5 %

Ordering information

DCN multimedia Powering Switch
Switch for supplying additional power to the DCN multimedia devices, built-in Ethernet switch.
Order number **DCNM-PS**

DCN multimedia System Server Software



Features

- Automatic device discovery
- Control up-to 100 multimedia devices
- Client server solution
- No user interaction needed to run the system
- Automatic seat creation and assignment

The DCN multimedia System Software is used as a platform that controls the entire DCN multimedia system. Basic functions are included where others can be added depending on the functionality required.

System overview

In addition to the Bosch ST standard terms and conditions of sales, the Bosch DCN multimedia System Software is a great option to benefit from the Bosch maintenance service, keeping your DCN multimedia System Software always up-to-date. Refer to the product related information on www.boschsecurity.com.

Functions

DCN multimedia System Software is built as a server client solution and consists out of two main components: The Server Software and the Meeting Application.

Server Software
The Server Software is a set of Windows services. The individual services do not have user interfaces and are running at the background to control and monitor all the DCN multimedia components and optionally the Meeting Application(s) running on client PCs. To inform the user, a user interface is present for system state and diagnostics. Next to the services, it contains a license activation module. This module is needed to activate the license of the complete DCN multimedia conference system.
Once, the Server Software has been configured by means of the Meeting Application, the Server Software can run autonomic without any user intervention.

Meeting Application
The Meeting Application acts as a PC user interface, to configure the system and to manage and prepare meetings. This application is, next to the Multimedia Device, the user interface of the system. To prepare and manage a meeting from the Meeting Application the DCN multimedia Meeting Preparation and Management software module is needed.
The software server and meeting application(s) can, but not necessarily need to, run on separate computers. This allows the possibility for assigning functionality to different users and/or PCs – for instance, let one or more users configure the system (configure) while others are registering persons and assign them to become participants (prepare meeting) and others can actually manage the meeting (manage meeting) on a separate PC.
The system software contains the following basic functionally:

Configuration from the Meeting application:
- Devices are automatically discovered and can be automatic or manual assigned to a seat.
- Setup chairperson seat.
- User management.
- Setup volumes of multimedia loudspeakers and sound reinforcement output on DCNM-APS.
- Enable/disable Acoustic feedback suppression.
- 5-band parametric room equalization.
- User definable priority and summon tones.

Functions which can be accessed from a multimedia device which is setup as a chairperson seat:
- Microphone modes:
  - Open mode automatic, Open mode manual managed, Override mode.
- Number of open microphones from 1 to 25.
- Number of waiting speaker from 0 to 200.
- Number of responders from 1 to 100.
- Enable/disable automatic microphone off after 30 seconds.
- Enable/disable priority tone.
- Master volume control.
- Initiate a summon chime.

The PC running the software server needs to be activated with a license before it can be used. When DCNM-LSYS DCN multimedia system software is ordered, it will be sent as an e-mail. The e-mail contains all information how to activate the system.
In-case the PC running the software server needs to be replaced; an easy-to-use solution is in place to activate the replacing PC without the need to order new software. Contact your Bosch representative for this, if required.

Parts included

Quantity	Components
1	E-mail with activation information.

1

Technical specifications

Technical

Single PC system running server software and meeting application:	• Windows 7 home premium 64 bits: • Processor 4 cores 2.4 GHZ. • 8 GByte RAM. • 500 GB free disk space. • 1 GB Ethernet card.
PC running the server software in a multi-PC system:	• Windows 7 professional 64 bits: • Processor 4 cores, 2.4 GHZ. • 8 GByte RAM. • 500 GB free disk space. • 1 GB Ethernet card.
PC running the meeting application only:	• Windows 7 home premium 64 bits: • Processor 4 cores, 2.4 GHZ. • 8 GByte RAM. • 500 GB free disk space. • 1 GB Ethernet card.

Switches
The following minimal requirements apply to switches:
- 1 Gbit or higher with hardware switching capabilities.
- Quality of Service through differentiated services with 4 or more output queues and strict priority packet scheduling.
- (Optional) IGMPv3 or IGMPv2 snooping. To optimize bandwidth usage, IGMP snooping can be used. This is useful in systems with >10 multicast channels, although not absolutely required. Sufficient performance for handling a large number of IGMP query responses, depending on the number of (directly or indirectly) connected devices to that switch. Hardware support for IGMP is strongly recommended.
- (Optional) (Rapid) Spanning Tree support in case redundant networks are used.
- (Optional) SNMPv3 support for switch supervision purposes.

The following table shows recommended switches to use with OMNEO. These managed switches may offer support for the optional requirements as stated above.

Managed switches	IGMP Snooping	RSTP (Y/N)	SNMPv3 (Y/N)
HP Networking E2520 series	v1, v2, v3	Y	Y
HP Networking V1900 series	Y[2]	Y	Y
HP Networking V1910 series	Y3	Y	Y
Netgear GS108T / Netgear GS108Tv2	v1, v2	Y	Y
Cisco SG 300 series	v1, v2, v3	Y	Y
Cisco SG 200 series	v1, v2	Y	N
Cisco ESW 500 series	v1, v2	Y	Y
Cisco SLM2000 series	v1, v2	N	N
D-Link DGS 1210 series	v1, v2	Y	Y

The price range for these switches varies depending on the number of ports the switch may have. More expensive switches are also available, but have not been taken into consideration.

Routers
The following minimal requirements apply to routers:
- 1 Gbit or higher Ethernet ports.
- Supports PIM-DM or Bidirectional PIM.
- Performs IP routing in hardware (i.e. a 'layer 3 switch') to minimize the routing delay.
- Packet forwarding rate > 1,000,000 packets per second per port (e.g. 8 Mpps for an 8-port router).
- Non-blocking backplane per switching port, i.e. 2 Gbit per port (e.g. 16 Gbps for an 8-port router).
- MAC address table of at least 1000 addresses per directly connected subnet.

The following table contains routers or router families (all of which are actually 'layer 3 switches') that are recommended to be used in OMNEO systems:

Layer 3 switches (or switch series)	Remarks
Cisco 3560-X series	Requires IP services feature set
HP 3500 yl series	Requires Premium License
HP 3800 series	-
HP 4800 series	-
HP 5500-EI series	-
Netgear GSM7328S-200	-
Netgear GSM7352S-200	-

Ordering information

DCN multimedia System Server Software
DCN multimedia System Software controls the entire DCN multimedia system. Other software modules can be added to extend functionality. Configuration can be done using the Meeting Application.
Order number **DCNM-LSYS**

Software Options

DCN multimedia Meeting Prep & Management
DCN multimedia Meeting Preparation and Management software module gives the ability to prepare and manage meetings using the meeting application. Can only be used in combination with DCNM-LSYS.
Order number **DCNM-LMPM**

DCN multimedia Discussion Management
DCN multimedia Discussion Management gives the ability to manage additional discussion options from the meeting application and multimedia device. Can only be used in combination with DCNM-LSYS.
Order number **DCNM-LDM**

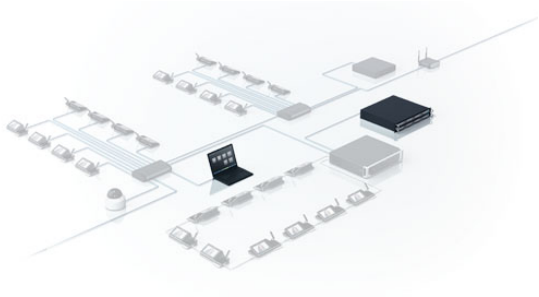
DCN multimedia Participant Database
DCN multimedia Participant Database gives the ability to define participant's names and assign participants to seats. Can only be used in combination with DCNM-LSYS and DCNM-LMPM.
Order number **DCNM-LPD**

DCN multimedia Media Sharing
DCN multimedia Media Sharing gives the ability to use share the display of an remote presentation computer to all Multimedia Devices. Can only be used in combination with DCNM-LSYS.
Order number **DCNM-LMS**

DCN multimedia Camera Control
DCN multimedia Camera Control gives the ability to use Onvif compliant camera in the DCN multimedia system. Can only be used in combination with DCNM-LSYS.
Order number **DCNM-LCC**

1

DCN multimedia Meeting Prep & Management



Features

- Meeting and Agenda preparation and management
- Create structured meetings with agenda points
- Link multimedia content to meeting and/or agenda points
- Manage meetings

The DCN multimedia Meeting Preparation and Management software module enables the prepare and manage functions in the Meeting Application.

Functions

Prepare
The prepare function gives the possibility to prepare meetings and agendas. While preparing the agenda for each topic, basic discussion settings can be defined or even a complete set of discussion settings can be selected from a template. Also new discussion templates can be defined for a personal customized set of settings and links to multimedia content could be added.

Manage
The manage function gives the possibility to manage the meeting by an operator or chairperson. When meetings are prepared, one of them can be activated. While activating a meeting all the Multimedia Devices show automatically the meeting topic of the activated meeting. The next step would be that the meeting is opened using the Meeting Application, now the meeting is officially opened. Depending on the settings a meeting can be opened automatically after it has been activated and even optionally the first agenda topic can be open automatically after the meeting has been opened. When the agenda is opened a discussion can be managed. After the topic is done it can be closed and the next topic can be opened. At last the meeting can be closed. During the meeting a summon chime can be initiated which can be used to page the participants and ask them to return to the meeting room.
The DCN multimedia Meeting Preparation and Management enables the following in the meeting application.

Prepare meeting
- Prepare meeting.
- Prepare agenda's.
- Prepare discussion templates with links to multimedia content like documents.

Manage meeting
- Activate, deactivate, open and close meetings.
- Open and close agenda topics.
- Initiate summon chime.
- Manage discussion:
  - Grant speech, Cancel speakers, Cancel requests, Shift requests.
- Change basic discussion setting:
  - Microphone mode: Open and Override.
  - Number of open microphones.
  - Enable/Disable automatic microphone off after inactivity of 30 seconds.
  - Priority options.

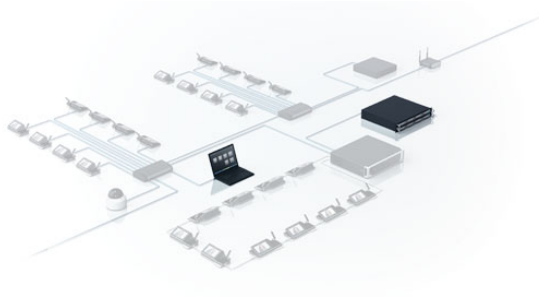
Parts included

Quantity	Components
1	E-mail with activation information.

Ordering information

DCN multimedia Meeting Prep & Management
DCN multimedia Meeting Preparation and Management software module gives the ability to prepare and manage meetings using the meeting application. Can only be used in combination with DCNM-LSYS.
Order number **DCNM-LMPM**

DCN multimedia Participant Database



Features

- Comprehensive database information for all participants
- Reuse of participant information across meetings
- Define discussion, manage meeting and priority authorization for each individual participant

The DCN multimedia Participant Database software module enables the possibility in the Meeting Application to compile a comprehensive database of information relating to participants. During the meeting preparation stage, the participant can be assigned to the meeting. The advantage of this method is that persons participating in multiple meetings only need to be entered once, and can be assigned to any desired meeting without re-entering the same person information again. Next to that, it allows to define a speaker list of participants for each individual agenda topic.

Functions

Database
All information is entered via the meeting application, before or during conference proceedings. A considerable amount of data can be specified for each participant. All specific information like: person's first name, middle name, last name, title, region and country, can be reused and does not need to be re-entered for every meeting.
At meeting preparation it is possible to grant or deny authorization to individual participants in a specific meeting for discussion, meeting management and priority. Next to that participants can be placed in a speaker-list for each individual agenda topic.

Data Input
All person information is entered via the preparation area in the Meeting Application. For some entries (first name, last name) a number of characters are entered. For other entries (title, region, country), the input can easily be selected from a list of options that is presented by the system. This option list is automatically controlled by the system. When the user enters a text, it is automatically added to the list.

User rights
By defining the correct user rights, a participant information entry PC client can be created. This entry PC can be placed at the lobby of a conference hall entrance, where the registration officer can enter person information and assigning the persons to the desired meeting.

Parts included

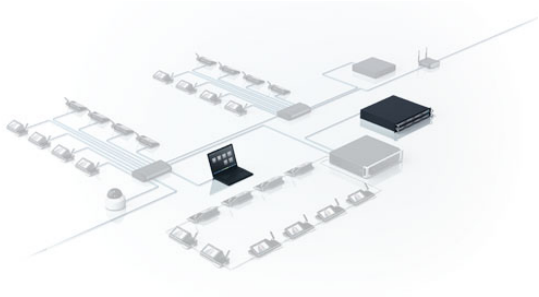
Quantity	Components
1	E-mail with activation information.

Ordering information

DCN multimedia Participant Database
DCN multimedia Participant Database gives the ability to define participant's names and assign participants to seats. Can only be used in combination with DCNM-LSYS and DCNM-LMPM.
Order number **DCNM-LPD**

1

DCN multimedia Media Sharing



Features

- Media sharing from remote presentation computer
- Shared screen is auto scaled

The DCN multimedia Media Sharing makes it possible to share the display of a remote presentation computer to all displays of the Multimedia Devices. The chairperson or meeting manager can activate the presentation mode using the Meeting Application or using a Multimedia Device. When the presentation mode is activated the screen of a remote presentation computer is streamed via the network to all Multimedia Devices.

Functions

When a chairperson or a meeting manager activates the presentation mode, all screen of the Multimedia Devices automatically show the screen of the remote presentation computer. Enabling the presentation mode can be done from the Meeting Application, or from a Multimedia Device with the correct authorizations.
The media sharing is very easy to use, and requires no configuration. Only a small application needs to be started on the remote presentation computer, and does not require any installation procedures. The person who wants to share the display of the remote presentation computer just connects to the server running the DCN multimedia software and starts the small application.

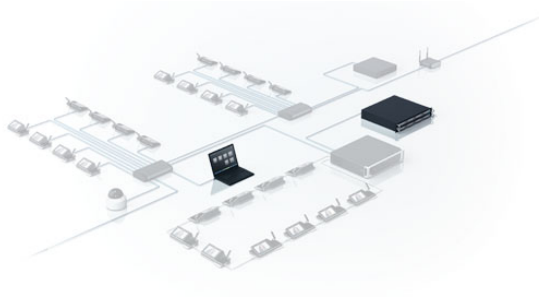
Parts included

Quantity	Components
1	E-mail with activation information.

Ordering information

DCN multimedia Media Sharing
DCN multimedia Media Sharing gives the ability to use share the display of an remote presentation computer to all Multimedia Devices. Can only be used in combination with DCNM-LSYS.
Order number **DCNM-LMS**

DCN multimedia Camera Control



Features

- Interface with Onvif compliant IP camera's
- Automaticaly shows current speaker in the multi-media device displays
- Automatic discovery of cameras

The DCN multimedia Camera Control software modules make it possible to interface the DCN multimedia system with Onvif compliant IP cameras. It selects fixed or pre-positioned cameras (such as the Bosch HD Conference Domes) to be activated to display the current active speaker in a meeting.

Functions

When a participant’s microphone is activated, the camera assigned to this position is activated. When none of the microphone is activated, an overview camera is automatically activated. The video image is shown on the Multimedia Device’s touch-screen and can also be displayed on the Meeting Application or at hall-displays together with the information of the participant speaking. Configuration is easy because all cameras are Onvif compliant automatically discovered.

The DCN multimedia Camera Control enables the following in the meeting application:

- Configure system:
  - Define camera and preposition per seat
  - Define overview camera

Parts included

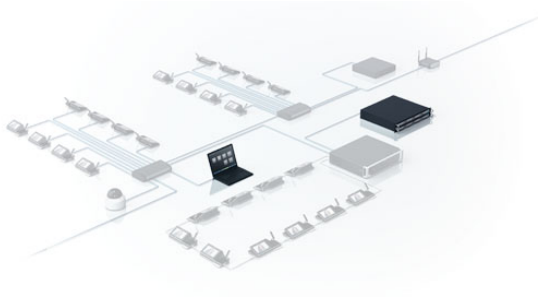
Quantity	Components
1	E-mail with activation information.

Ordering information

DCN multimedia Camera Control
DCN multimedia Camera Control gives the ability to use Onvif compliant camera in the DCN multimedia system. Can only be used in combination with DCNM-LSYS.
Order number **DCNM-LCC**

1

DCN multimedia Software Maintenance Agreement



Features

- Best-possible system performance
- Upgrading software rather than expensive hardware
- Regular updates

With regular software updates, the DCN multimedia System grows with you, guaranteeing the best-possible functionality. This includes the licensed system and seat software, as well as third-party compatible updates.
If DCN multimedia software modules are added at a later date, the SMA can be upgraded so that these modules are updated as well.
The SMA is free-of-charge for the first year after activating a DCN multimedia system.
To maintain the DCN multimedia system software, Software Maintenance Agreements (SMAs) are available for one, two or five years.

Ordering information

DCN multimedia Software Maintenance Agreement 1 year
DCN multimedia Software Maintenance Agreement for one additional year. Includes the licensed system and seat software upgrades, as well as third-party compatible updates.
Order number **DCNM-1SMA**

DCN multimedia Software Maintenance Agreement 2 years
DCN multimedia Software Maintenance Agreement for two additional years. Includes the licensed system and seat software upgrades, as well as third-party compatible updates.
Order number **DCNM-2SMA**

DCN multimedia Software Maintenance Agreement 5 years
DCN multimedia Software Maintenance Agreement for five additional years. Includes the licensed system and seat software upgrades, as well as third-party compatible updates.
Order number **DCNM-5SMA**

DCN multimedia Extension Software Maintenance Agreement
DCN multimedia Extension Software Maintenance Agreement to extend existing SMA with new software modules.
Order number **DCNM-XSMA**

DCN multimedia System Network Cables

The System Network Cables are terminated at both ends with RJ45 like connectors with additional power pins. The system network cables are used to connect a multimedia device to the audio powering switch or to the powering switch. It provides network communication and power transports in one cable. The system network cables are used when loop-trough and redundant cable connections are required.

Parts included

Quantity	Components
1	DCNM-CBxx DCN multimedia System Network Cable

Technical specifications

Mechanical

Dimensions (dia.)	6.35 mm
Material	PVC
Color	Traffic black RAL 9017
Bending radius	40 mm

Ordering information

DCN multimedia System Network Cable 2m
2 m (6.6 feet), system network cable for connecting all DCN multimedia devices.
Order number **DCNM-CB02**

DCN multimedia System Network Cable 5m
5 m (16.0 feet), system network cable for connecting all DCN multimedia devices.
Order number **DCNM-CB05**

DCN multimedia System Network Cable 10m
10 m (33.0 feet), system network cable for connecting all DCN multimedia devices.
Order number **DCNM-CB10**

DCN multimedia System Network Cable 25m
25 m (82.0 feet), system network cable for connecting all DCN multimedia devices.
Order number **DCNM-CB25**

1

HD Conference Dome

Features

- HD 1080p and 720p resolutions
- 160x zoom (10x optical, 16x digital)
- Industry standard HD-SDI output
- Control and configuration via Ethernet
- Screen line option for displaying delegate names up to 16 characters

The HD Conference Dome is an extremely compact and easy to install PTZ camera with an industry standard HD-SDI output for superb HD quality video.

The camera provides complete network-based control of all dome functionality including pan/tilt/zoom operation, presets as well as web-based configuration of all dome settings.

Notice

Use of Camera

The HD Conference Dome is designed for use in conferencing applications only.

HD Conference Dome highlights

With a dome diameter of only 5.04 inches (12.8 cm), the HD Conference Dome is nearly 50% smaller than the Bosch AutoDome. These compact dimensions make the HD Conference Dome ideal for conference environments.

Despite its compact design, the HD Conference Dome delivers state-of-the-art technology and features that are rare to most compact PTZ cameras. Its variable pan and tilt speeds and AutoPivot ensure optimal camera control and viewing at all zoom levels. The high-performance 160x (10x optical/16x digital) zoom autofocus camera incorporates the latest digital imaging technology with excellent sensitivity and resolution. With 64 user-defined presets the HD Conference Dome is not small on features.

The HD Conference Dome maximizes your conference investment by integrating with Bosch conference systems including the DCN Next Generation conference system, as well as the DCN Wireless discussion system.

The HD Conference Dome is simple to install and use; available with surface, wall, recessed, and pipe mount options.

System overview

High-performance 160x PTZ day/night camera

The HD Conference Dome PTZ camera has a 1/2.5-inch progressive scan CMOS sensor. With up to 1080p resolution and sensitivity to below 1.0 lux, the HD Conference Dome offers exceptional performance at a very affordable price.
Pan and tilt preset repeatability are accurate to within ±0.1 degrees to ensure that the correct scene is captured every time. The HD Conference Dome delivers variable pan/tilt speeds from a crawl speed of only 1 degree per second up to an ultra-quick 120 degrees per second. The dome is capable of pan speeds of 360 degrees per second and tilt speeds of 100 degrees per second between prepositions. The HD Conference Dome provides a tilt range of 0 to 94 degrees, and a pan range of up to 360 degrees continuous rotation.
The AutoScaling (proportional zoom) and AutoPivot (automatically rotates and flips the camera) features ensure optimal control.

Industry standard HD-SDI output

The HD Conference Dome makes use of an industry standard HD-SDI output for superb HD quality video. The HD Conference Dome supports 1080p30 and 720p60 resolutions for 50 Hz and 60 Hz models at 16:9 aspect ratio.

Multiple video streams

Next to the HD-SDI output, Bosch's innovative Quad-streaming feature enables the HD Conference Dome to deliver three H.264 streams together with an M-JPEG stream in full and reduced bandwidth modes for monitoring purposes.

Image stabilization

Image stabilization algorithms included with the HD Conference Dome reduces camera shake in both the vertical and horizontal axis, resulting in exceptional image clarity. Bosch’s unique image stabilization solution does not reduce camera sensitivity, unlike competitive systems.

Reliability

As with all Bosch products, the HD Conference Dome has been subjected to the industry’s most comprehensive and demanding battery of endurance tests such as HALT (highly accelerated life testing) to make sure it will hold up through years of use. And of course, it comes with Bosch’s industry-leading 3-year warranty.

Functions

The following are some of the features that make the HD Conference Dome the perfect fit for a variety of conference applications.

Network-based control and configuration
The HD Conference Dome enables full camera control and configuration capabilities over the network. Operators or technicians can control camera pan/tilt/zoom operation, and presets virtually anywhere without need for additional wiring.

The embedded web server lets the installer access all the user settings, make camera adjustments, and update firmware via a standard web browser or via the Bosch Video Management System.

Device management
Simple Network Management Protocol (SNMP) support facilitates the remote monitoring and management. The HD Conference Dome provides full support for SNMP v3.

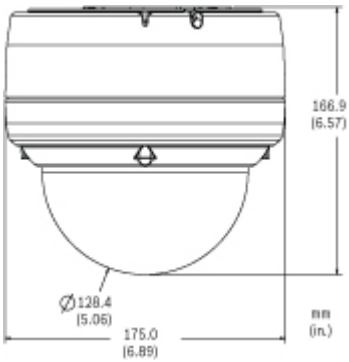
Ease of installation and servicing
The HD Conference Dome has been designed for quick and easy installation. The dome comes fully assembled and ready for surface mount applications. Also available are wall, recessed, and pipe mounting kits which allow the HD Conference Dome to be easily adapted for the individual site requirements.

Power over Ethernet
Power for indoor camera models may be supplied via a Power over Ethernet Plus (PoE+, IEEE 802.3at, class 4) compliant network cable connection. With this configuration, only a single cable connection is required to power and to control the camera while also monitoring images from the camera via the web server. An additional coax cable is required for the video from the HD-SDI output.

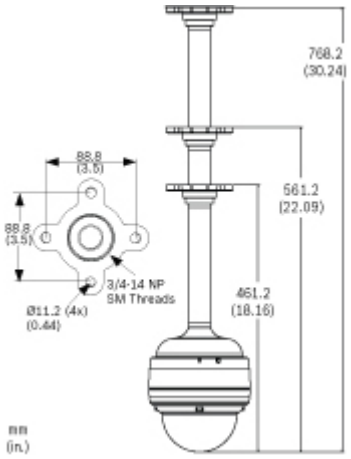
Certifications and approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

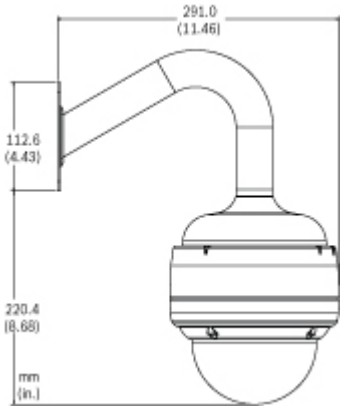
Installation/configuration notes

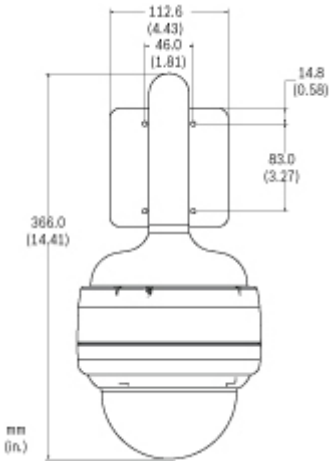


HD Conference Dome Dimensions

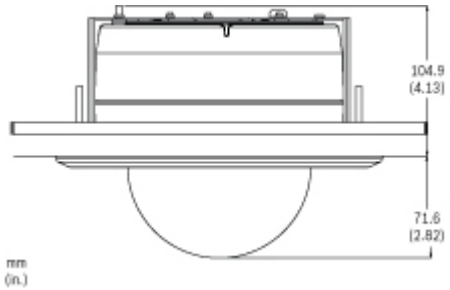


Pipe Mount Dimensions





Wall Mount Dimensions



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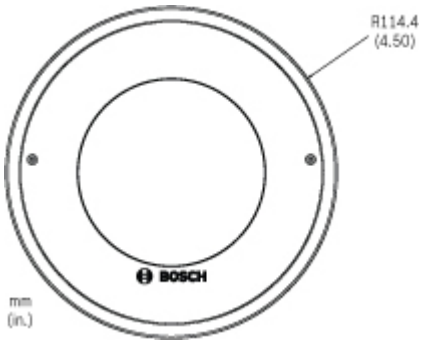
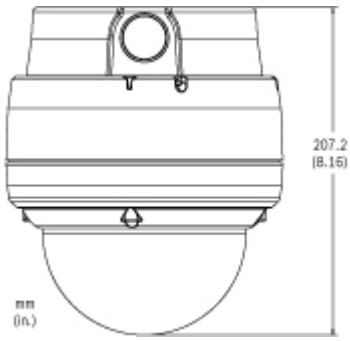


In-Ceiling / Recessed Mount Dimensions



Surface Mount Dimensions

Technical specifications

10x HD Camera

Imager	1/2.5 inch progressive scan CMOS	
Number of Pixels	2.1 Megapixels	
Aspect Ratio	16:9	
Lens	10x optical zoom (6.3 to 63 mm) (F1.8/F2.5 to close)	
Focus	Automatic with manual override	
Iris	Automatic with manual override	
Field of View	Horizontal: 5.5° to 50.6° Vertical: 3.1° to 29.3°	
Automatic Gain Control	Normal, Medium, High, Fixed	
Synchronization	Internal	
Aperture Correction	On/Off	
Digital Zoom	16x	
Sensitivity(typical)[1]	**30 IRE**[2]	**50 IRE**[2]
Day Mode		
SensUP Off	1.2 lx	2.0 lx
SensUP On (64x)	0.038 lx	0.063 lx
Night Mode		
SensUP Off	0.06 lx	0.1 lx
SensUP On (64x)	0.0018 lx	0.0031 lx
Electronic Shutter Speed (AES)	1x to 64x; 1/50 (1/60) to 1/10000	
Signal to Noise Ratio	> 50 dB (AGC off)	
Backlight Compensation	On/Off	
White Balance	ATW, Indoor, Outdoor, AWB Hold, Extended ATW, Manual (adjustable R and B signals in Manual mode)	
Day/Night	Monochrome, Color, Auto	

1. F1.8, 1/30 (1/25) shutter, maximum AGC.
2. Tinted bubble adds 0.8 f-stop loss.

Software Control

Camera Configuration	Via Internet Explorer Web browser version 7.0 or later or Bosch Configuration Manager
Software Update	Firmware upload

Video

HD-SDI	
Standards	SMPTE 292M
Resolutions (H x V) and Frame Rates	
• Full HD/1080p	1920 x 1080, 30 ips
• HD/720p	1280 x 720, 60 ips
Data Rate	1.5 Gbit/s
Video Delay	10 ms

Network Stream

Standards	H.264 (ISO/IEC 14496-10), M-JPEG, JPEG
Streaming	Individually configurable streams in H.264 and M-JPEG, configurable frame rate and bandwidth;
• 1080p30	One (1) H.264 1080p30 stream plus one (1) M-JPEG and one (1) I-frame stream
• 720p60	One (1) H.264 720p60 stream plus one (1) M-JPEG and one (1) I-frame stream
GOP Structure	IP, IBP, IBBP
Data Rate	9.6 kbps to 6 Mbps
Overall IP Delay	240 ms
Resolutions (H x V) and Frame Rates	
Stream 1	
• Full HD/1080p	1920 x 1080, 30 ips
• HD/720p	1280 x 720, 60 ips
Stream 2[3]	
• SD/480p (WVGA)[4]	854 x 480, 30 ips
• SD/240p (WQVGA)[4]	432 x 240, 30 ips

3. Stream 1 must be set to 720p at 30 ips.

4. Images displayed in 16:9 aspect ratio.

Network	
Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNTP, SNMP, RTSP, 802.1x, iSCSI, DynDNS, UPnP
NTCIP Protocols	
• CCTV Camera Control	NTCIP 1205
• Application Layer	SNMP per NTCIP 1101:1996 & NTCIP 2301
• Transport/Network Layers	TCP/IP per NTCIP 2202:2001
• Sub-network Layer	PMPP (Point to Multi-Point Protocol) per NTCIP 2101:2001 & NTCIP 2102:2003
Ethernet	10-Base T/100 Base-TX, auto-sensing, half/full duplex, RJ45
PoE+	IEEE 802.3at, class 4

Mechanical/Electrical

Pan Range	0–360° continuous
Tilt Angle	0–93.6°
Variable Speed	Pan: 1°/s to 120°/s Tilt: 1°/s to 100°/s
Pre-position Speed	Pan:360°/s Tilt: 100°/s
Preset Accuracy	± 0.1° typical
Rated Voltage	24 VAC ± 10%, 50/60 Hz or PoE+ (IEEE 802.3at, class 4)
Power Draw	17 W typical

Environmental

Operating Temperature	–10°C to 30°C (14°F to 86°F)
Storage Temperature	–20°C to 60°C (–4°F to 140°F)
Operating Humidity	0% to 90% relative, non-condensing

Miscellaneous

Pre-positions	64
Screen Line	Up to 16 characters (only standard ASCII character set can be used)
Supported Languages	English, German, Dutch, French, Italian, Spanish, Portuguese, Polish, Russian, Chinese, and Japanese

User Connections

Power	
• PoE+, Indoor Models	RJ-45 100 Base-TX Ethernet PoE+ IEEE 802.3at, class 4
• Camera, All Models	24 VAC, 50/60 Hz
Video	BNC with HD-SDI output
Control	RJ-45 100 Base-TX Ethernet

Construction

Size (Diameter x Height)	153.0 x 133.0 mm (6.02 x 4.61 in.)
Bubble Size	128.0 mm (5.04 in.)
Weight	1.92 kg (4.24 lb)
Material	
• Housing	Cast aluminum
• Bubble	Acrylic
Color	White (available in all regions) or Charcoal (available only in the Europe, Middle East, and Africa region)

Ordering information

VCD-811-IWT HD Conference Dome, White, with Tinted Bubble
White, 1080p HD indoor camera for use with video conference system, with tinted bubble
Order number **VCD-811-IWT**

VCD-811-ICT HD Conference Dome, Charcoal, with Tinted Bubble
Charcoal, 1080p HD indoor camera for use with video conference system, with tinted bubble (available only in the Europe, Middle East, and Africa region)
Order number **VCD-811-ICT**

Accessories

VJR-A3-IC AutoDome Junior HD Indoor Recessed Mount
Recessed mount for indoor camera applications that do not require IP54 or a plenum rating
Order number **VJR-A3-IC**

VJR-A3-SP In-ceiling Support Kit for AutoDome 700/800 Series and AutoDome Junior HD
Suspended ceiling support kit for AutoDome 700 and 800 Series and AutoDome Junior HD In-ceiling mounts
Order number **VJR-A3-SP**

VJR-A3-IC54 AutoDome Junior HD Plenum-rated and Outdoor Recessed Mount
Recessed mount required for indoor camera applications that must attain an IP54 or a plenum rating, and required for all recessed outdoor camera applications
Order number **VJR-A3-IC54**

1

VEZ-A2-JC Surface Mount Adapter
Charcoal adapter for AutoDome Junior surface installations
Order number **VEZ-A2-JC**

VEZ-A2-JW Surface Mount Adapter
White adapter for AutoDome Junior surface installations
Order number **VEZ-A2-JW**

VEZ-A2-PC AutoDome Junior Pipe Mount
Charcoal
Order number **VEZ-A2-PC**

VEZ-A2-PW AutoDome Junior Pipe Mount
White
Order number **VEZ-A2-PW**

VEZ-A2-WC AutoDome Junior Wall Mount
Charcoal
Order number **VEZ-A2-WC**

VEZ-A2-WW Wall Mount
White
Order number **VEZ-A2-WW**

VJR-SBUB2-CL AutoDome Junior HD Clear Bubble, Indoor
Order number **VJR-SBUB2-CL**

VJR-SBUB2-TI AutoDome Junior HD Tinted Bubble, Indoor
Order number **VJR-SBUB2-TI**

UPA-2450-60 Power Supply, 120 V, 60 Hz
Indoor power supply for camera. 120 VAC, 60 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-60**

UPA-2450-50 Power Supply, 220 V, 50 Hz
Indoor power supply for camera. 220 VAC, 50 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-50**

DCN Conference Solutions

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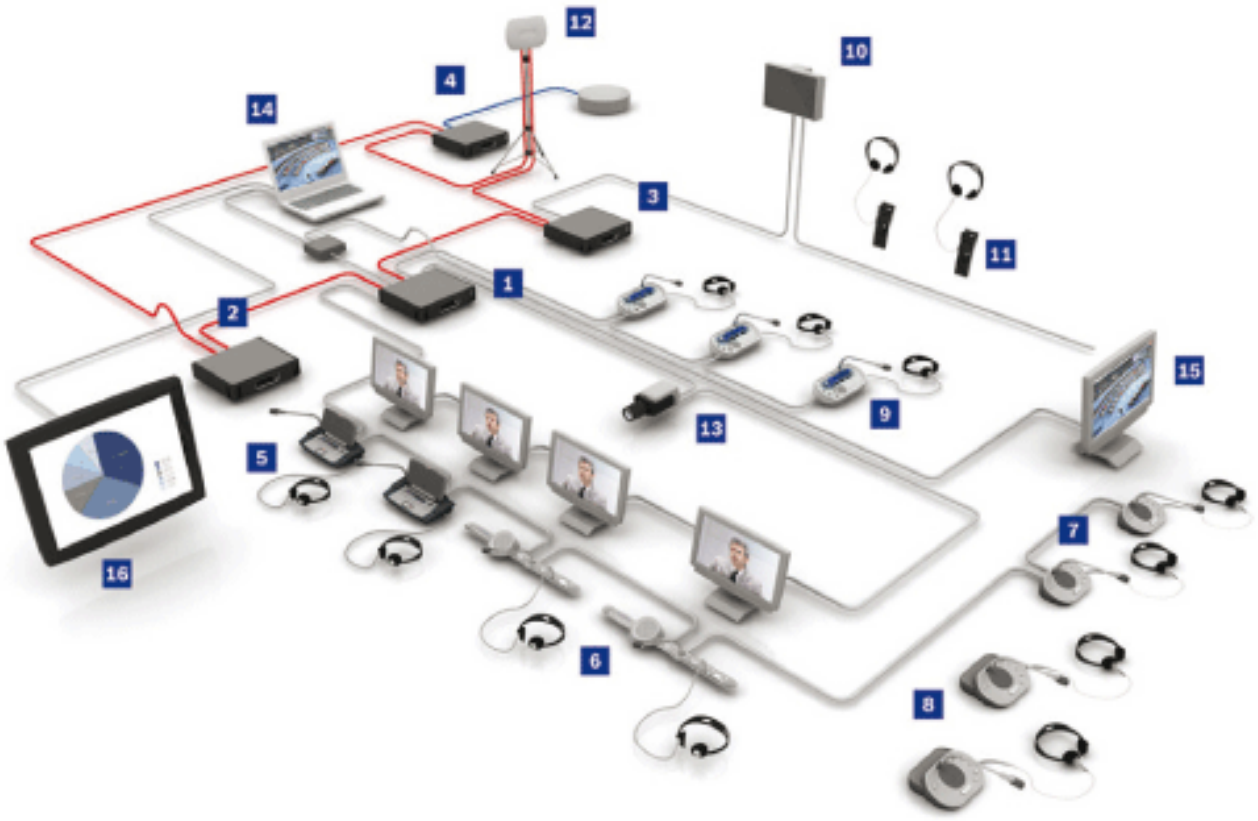
Introduction

World's first fully digital conference system, enhanced for even higher performance
The Bosch Digital Congress Network brings the benefits of innovative digital technology to discussion and conference systems. It is the first entirely digital system of its kind, and offers versatility, high audio quality and data transmission while providing complete control over conference proceedings. Operation and installation are highly simplified, with modern, user-friendly control software and flexible management facilities for all types of conferences. Whether you install a wired set-up (using DCN Next Generation units), a wireless set-up (using DCN Wireless units) or create a strong combination by mixing both, the DCN system puts you in total control of your conference environment. It is suitable for events from small, informal gatherings up to international multilingual conferences.

Digital performance with user-friendly software control
The system meets every requirement of modern conference management. Facilities include basic microphone management, delegate identification and registration, electronic voting, information distribution and display, and extensive simultaneous interpretation. The DCN is above all user-friendly. With the appropriate software modules, a single operator can control and monitor even the largest of conferences.

Modular system approach
By simply daisy-chaining DCN Next Generation wired units or adding DCN Wireless units, any configuration can be put together. This modular structure means a system can be tailored for conferences at all levels. Systems are easily extended by adding more equipment like audio expanders or software modules.

2



System network

1.	Central Control Unit	9	Interpreter desks
2.	Digital Audio Expander (audio-logging)	10	Integrus radiator
3.	Integrus Transmitter	11	Integrus receivers
4.	CobraNet™ unit	12	Wireless Access Point
5.	Concentus units	13	Camera
6.	Flush-mount units	14	DCN control software
7.	Wired discussion units	15	Touchscreen
8.	Wireless discussion units	16	LCD video screen

Range of equipment
The Bosch DCN range includes wired and wireless conference units, central control units, wireless access point (WAP), simultaneous interpretation and language distribution equipment, conference control software, information provision and installation equipment. This is complemented by external equipment such as PCs, monitors, booster amplifiers, loudspeakers and printers, all of which are easily integrated into the DCN system.

Advanced audio coupling
Via the optical network, a variety of audio couplings are possible, including coupling small systems with a few languages into a large system with as many as 31 languages. It is also possible to extract and insert both digital (AES/EBU or SPDIF) and analog audio. Other advanced audio coupling techniques include CobraNet™. CobraNet™ is a combination of software, hardware and network protocol that allows distribution of many real-time, high-quality digital audio channels over an Ethernet network using CAT5 cables. CobraNet™ makes it easy to distribute audio in buildings and connect the DCN system to other audio CobraNet™-compatible devices such as audio recorders and audio mixers.

Contribution equipment
Contribution equipment covers the units that participants use to take part in a conference. Depending on the type of contribution unit, participants can listen, speak, register a request-to-speak, receive screen messages, hold private conversations with other participants via an intercom, take part in electronic voting and receive simultaneous interpretation of the floor language.
Chairman units have a microphone priority system that temporarily mutes all active delegate microphones.

Excellent speech intelligibility
The advanced digital technology delivers excellent audio performance with no loss in signal quality or level. Each unit receives an audio signal of consistently high quality, which makes a significant contribution to speech intelligibility. The DCN system virtually eliminates problems associated with conventional systems, such as background noise, interference, distortion and cross talk.
The DCN Wireless units are also protected against interference from mobile equipment using Bluetooth or microwave signals. What's more, the system is mobile phone-proof, so participants can leave their mobile phones switched on during meetings without disrupting the discussion system signal.

Reduced installation costs
Fast, cost-saving installation is an important benefit of the DCN system. DCN Next Generation units use thin, flexible, twin coaxial cables to carry all the system's digital signals, eliminating the need for costly and vulnerable multi-core cables. The cables are easily run through existing ducting and cable conduits. They can simultaneously carry up to 32 high-quality contribution channels and 32 high-quality distribution channels.

Wireless convenience in all aspects
When using DCN Wireless discussion units, conferences and seminars can be set up with a great degree of freedom thanks to the system's flexible design. The WAP can be mounted on a wall, ceiling or tripod, and is easily positioned for best technical or aesthetic effect. Individual wireless discussion units can be added or rearranged by simply picking them up and moving them. With minimal time required for set-up or break-down, multiple events can be planned in sequence with virtually no delays. The DCN Wireless gives great support to conferences and seminars anywhere people meet.
Simple battery maintenance is essential for a wireless application. Discussion units use lithium-ion batteries with little or no charge degradation during their long life. A fully charged battery lasts approximately 20 hours, which is far longer than most meetings or conferences. Batteries have a short recharge time – as little as a few hours – and as only the battery packs need to be removed; the discussion units can remain in place. Furthermore, each unit has a patent-pending "sleep mode" to conserve power consumption during longer breaks. And, with the remote overview available via the Conference Software, an administrator can view the battery and signal statuses of all active discussion units.

Secure and stable wireless communication
The system makes use of secure wireless communication with 128-bit AES (Advanced Encryption Standard) Rijndael encryption. The intelligent system even features automatic subscription blocking.
Further subscriptions are prevented even if the administrator forgets to close the subscription process.
The WAP is linked to the CCU using Bosch's proprietary optical network, which provides digital optical communication and power supply over a single cable. Secure wireless communication between the WAP and the discussion units is in the 2.4 GHz band, which is license-free worldwide.

Simultaneous interpretation and language distribution equipment
The DCN system has comprehensive simultaneous interpretation and language distribution facilities that enable it to meet the demands of multilingual conferences.
All interpretation facilities are integrated into the basic system concept, with interpretations using the same digital trunk line cabling as all other system functions. It is relatively simple to integrate language facilities into existing DCN Next Generation or DCN Wireless systems.
The simultaneous interpretation system enables both direct and auto relay interpretation modes to cater for less familiar languages. Each interpreter desk has an output for the normal (primary) language and another for alternative languages.

Up to 31 different languages
The DCN Next Generation interpreter desk accommodates up to 31* language channels, plus the original floor language, all with an audio-bandwidth of 20 kHz. A maximum of six desks can be installed per interpreter booth.
When used in a stand-alone system, its built-in microprocessor is manually programmed to allocate language channels, channel routing and interlocks. In operator-controlled systems, the desk can be configured, controlled and monitored using the dedicated software module for simultaneous interpretation.
** The first 10 channels can be distributed through the DCN Wireless discussion units, the other channels are available throughout the rest of the system.*

Wired or wireless language distribution
The DCN system offers a choice for language distribution. When used in combination with DCN Next Generation delegate units, language distribution can be via the system cabling, and languages are accessed and selected using channel selector units or delegate units with built-in channel selection facilities.
When using the DCN Wireless discussion units, language distribution is via the secure wireless signal and participants can receive the language channels with the built-in channel selectors in the units.
In addition, the Integrus digital infrared (IR) language distribution system can be used to distribute languages throughout the conference venue using IR transmitters and radiators. Access is by means of personal infrared receivers with headphones.

Integrus System for wireless language distribution

Integrus is connected via the optical network to the DCN system to distribute all 32 languages with IR-digital technology that conforms to IEC 60603 part 7. IR digital technology ensures maximum sound quality with a signal-to-noise ratio of 80 dB. Integrus also incorporates a special operation mode to couple rooms. This means that multiple systems located in separate rooms can provide exactly the same language. For more information about Integrus, see the Integrus Data Brochure.

Central control equipment
The Central Control Unit (CCU) forms the heart of the conference management system. The CCU can operate stand¬alone to provide automatic conference control, or be controlled by an operator via a PC when more extensive management is required.
The CCUs can control up to 245 DCN Next Generation wired and 245 DCN Wireless contribution units* (such as delegate and chairman units, interpreter desks). If more capacity is required, CCUs can be stacked together to support up to 4000 microphone positions*. CCUs can also provide power for a number of contribution units. The maximum number depends on the type of contribution units used in the application.
** Requires the DCN-CCU2*

Central Control Unit

Fully automatic conference proceedings
In standalone mode, the CCU does not require operator control and automatically manages conference proceedings. It offers basic microphone management, simultaneous interpretation and voting facilities, as well as 32 high-quality audio channels. This effectively allows unsupervised control of even large, international conferences.

Operator control via a PC
For extended functionality, the CCU also offers operator control via a PC using an Ethernet cable. A comprehensive range of software modules is available for PC-controlled DCN systems. These modules run under Microsoft Windows, and integrate conference preparation, management and control into this operating system. Any combination of modules can be installed to satisfy specific system requirements.

Information and hall displays
A major strength of the DCN system is its ability to distribute information to conference participants quickly and efficiently for all requirements. A wide range of displays is supported, from personal LCD screens to video equipment for venue broadcasting.
In wired applications, the Concentus chairman unit and the Concentus Full Function delegate units can be used. These are equipped with a graphic LCD screen which displays delegate information, voting time, public and personal messages, microphone status and multilingual user instructions. These screens can display languages such as Chinese that use non-European characters. Interpreter desks are equipped with backlit LCD screens.

Automatic camera control
The DCN system can automatically show an image of the current speaker on flat screens or large projection screens in the main hall, lobby, interpreters' booths, breakout rooms or anywhere else required. Delegate information appears along with the image. For a general overview of all delegates, the system can switch to fixed-angle cameras. Camera control and configuration is automatic, so the system can be run without an operator. Bosch AutoDome cameras are ideal for this application and are especially useful when video conferencing between sites. Camera control ensures that participants always have appropriate details on the current speaker.

Applications

Application examples

Example 1

Small meetings

Shopping list

1. Discussion units with voting feature
2. Chairman unit with voting feature
3. Central control unit
4. Modular AutoDome
5. Bosch Plena Public Address System with XLA 3200 Line Array Loudspeakers

Guiding and controlling the discussion

Delegates request the floor by pressing the microphone button. Multiple requests are automatically placed on a waiting list by the CCU. The chair can register requests to speak and can override delegates with a priority key, which sounds an “attention” tone and mutes all delegate microphones. The system also includes a ‘voice mode’ which does not require the delegates to use the microphone on/off switch. This facilitates faster discussions.

Collecting and tallying votes

The system supports five kinds of voting: parliamentary, for/against, multiple choice, opinion polling and audience response.

The Concentus chairman unit can be used to start and stop voting with the voting script and results are displayed on the unit’s graphic LCD panel. Voting can also be controlled remotely, by an operator using a PC or touch screen, and results can be exported, in real-time and in various formats, to numeric hall displays or large screens.

Supporting video - without an operator

An image of the current speaker, including the speaker’s name, can be displayed on all monitors including those used for video conferencing.

Example 2

Advanced International conferences

Shopping list

1. Flush-mount units with card-reader module
2. Flush-mount chairman unit with card-reader module
3. Interpreter desks
4. Integrus receivers
5. Integrus radiator
6. PC and touchscreen with DCN Control Software

Notice

The interpreter booths shown in the drawing are for illustration purposes only and do not represent a real situation. Requirements with respect to sound insulation and other general characteristics of interpreter booths are specified by ISO (the International Organization for Standardization) in: ISO 2603 - Fixed booths for simultaneous interpretation. ISO 4043 - Mobile booths for simultaneous interpretation.

Adding software controls

Advanced software functions give operators an added level of control. There are features for configuring authorizations, making agendas, listing delegates, programming ID cards, synoptic layouts and electronic voting.

Registering attendance

Attendance registration enables delegates to identify themselves at the entrance or at their conference unit. Delegate positions can be equipped with ID card readers that accept PIN-codes. For high-security situations, the DCN Concentus and DCN flush-mount units can be extended with a fingerprint reader for biometric verification.

Simultaneous interpretation

When language interpretation is needed, soundproof booths can be equipped with DCN interpreter units. Each interpreted language is automatically distributed to headphones connected to delegate units or flush-mount channel selectors. To give delegates greater freedom of movement, interpreted languages can also be directed to wireless Integrus pocket receivers.

Example 3

Keeping pace with your changing needs

Shopping list

1. Concentus delegate units
2. Concentus chairman unit
3. Wired discussion units
4. Wireless discussion units
5. Wireless access point
6. Battery pack chargers
7. DCN interpreter desk
8. Integrus receivers
9. Integrus radiator
10. Central control unit
11. Digital audio expander
12. CobraNet™ unit
13. Integrus transmitter
14. DCN control software

Notice

The interpreter booths shown in the drawing are for illustration purposes only and do not represent a real situation. Requirements with respect to sound insulation and other general characteristics of interpreter booths are specified by ISO (the International Organization for Standardization) in: ISO 2603 - Fixed booths for simultaneous interpretation. ISO 4043 - Mobile booths for simultaneous interpretation.

Staying flexible with wired and wireless options

A DCN system can be built using wired or wireless units, or any combination of the two. When combined, the system has the unique benefits of both unit types. Wired systems can be extended with wireless discussion units for larger conferences or difficult to reach positions. For even larger setups, more CCUs can be added and, no matter what the configuration, advanced software functions make it easy to operate.

Expanding the possibilities

The DCN conference elements can be joined together in any number of ways. The interpretation system can be combined with an Integrus system, for wireless distribution of up to 32 language channels. Plus, the entire set-up can be interfaced to third-party systems, including broadcast, building management, and public address facilities. As a customized solution, individual touch screens can be added for voting functions and for instant access to online data.

Streaming content to remote participants

Using the Internet, the system can provide off-site delegates with full access to audio, video and data, so they can follow speeches, view presentation slides, see the live meeting video, get voting results, retrieve messages, and more.

Example 4

Location friendly

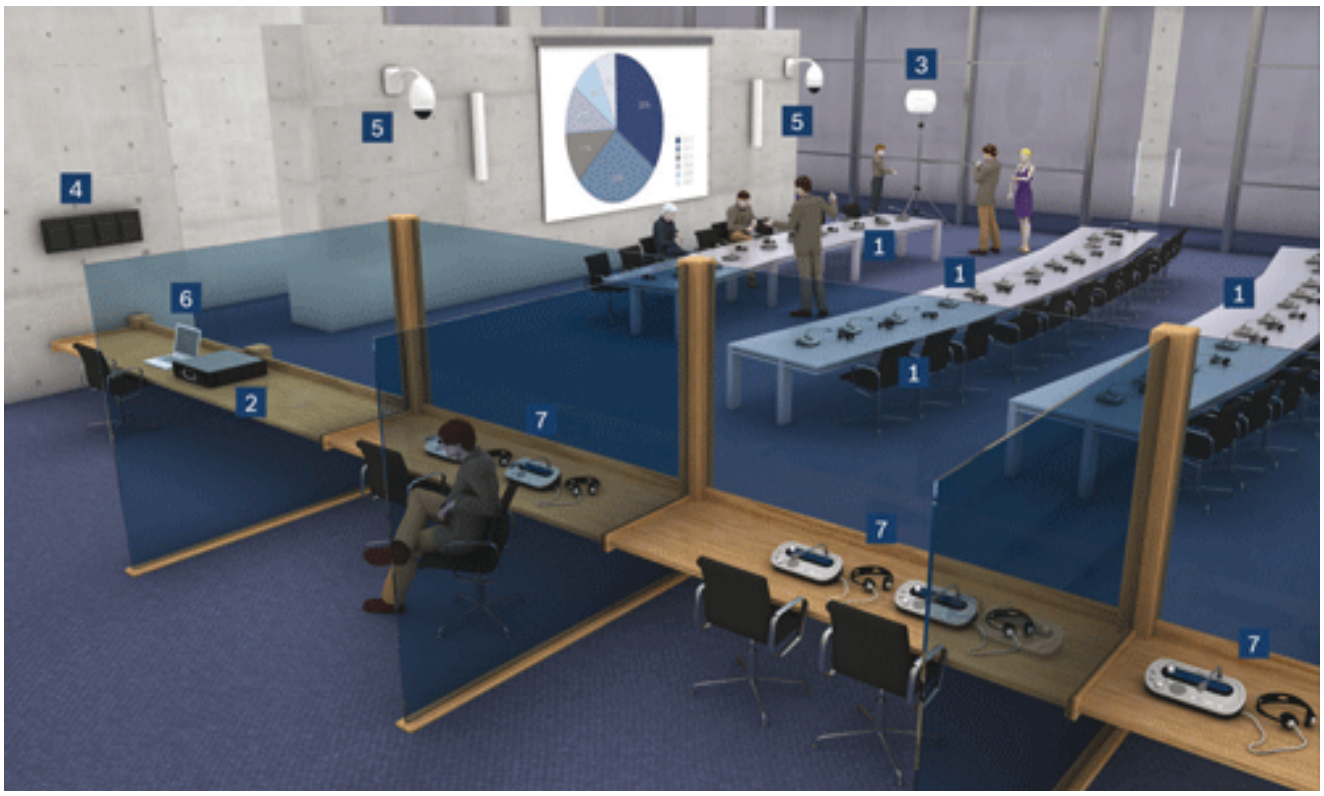
Shopping list

1. Wireless discussion unit
2. Wireless dual discussion unit
3. Central control unit
4. Wireless access point
5. Battery pack charger
6. DCN control software

Location Friendly

With superb sound and speech quality of up to 20 kHz, the DCN Wireless Discussion System allows participants to speak and listen with ease. Bosch has gone to great lengths to design a system that is easy to use and adaptable to changing situations and requirements. A basic discussion unit allows delegates to talk and listen, while a dual discussion unit is a cost-effective solution which serves two delegates simultaneously. The system includes also a ‘voice mode’ which doesn’t require the delegates to use the microphone on/off button and allow faster discussions. Chairman’s functionality can easily be added to a unit to allow a chairman to overrule delegates with the touch of a button. Featuring an award-winning Wireless Access Point (WAP), this discussion system can be installed, rearranged and operated with virtually no impact on the integrity of the location. Whether the venue is large or small, multiuse or historical, the DCN Wireless Discussion System by Bosch offers organizations unparalleled functionality and flexibility.

Example 5



Full featured wireless system

Shopping list

1. Wireless discussion unit with voting
2. Central control unit
3. Wireless access point
4. Battery pack charger
5. Modular AutoDome
6. DCN control software
7. DCN interpreter desk

Notice

The interpreter booths shown in the drawing are for illustration purposes only and do not represent a real situation. Requirements with respect to sound insulation and other general characteristics of interpreter booths are specified by ISO (the International Organization for Standardization) in: ISO 2603 - Fixed booths for simultaneous interpretation. ISO 4043 - Mobile booths for simultaneous interpretation.

Voting

For interactive situations where polling and voting are important, discussion units with voting functionality can be used in the DCN Wireless Discussion System. The operator can start, stop and suspend voting via the DCN control software on a personal computer or via a touch screen. Voting results can be synoptically displayed on various kinds of screens and logged when necessary. The DCN control software also allows for anonymous voting, displaying the total result. The Concentus chairman unit can be used to start, stop and suspend voting, with the voting script and results displayed on the unit's graphic LCD panel.

Interpretation

With a 10-language capacity, the system is designed so that delegates can follow the meeting in their preferred language. This is why certain DCN Wireless Discussion units come equipped with a channel selector and headphone jack. This makes it ideal for international 'dinner meetings' where cables can be highly inconvenient.

Automatic Camera Control

The system can automatically show an image of the current speaker on monitors or projection screens in the main hall, interpreters booths, or anywhere else required. Camera control is automatic, so no full-time operator is required. This makes the system also highly suitable for Video Conferencing, which is good news for the environment. For this application Bosch AutoDome cameras are ideal.

Wireless Discussion Units

The DCN Wireless system is designed to be the most flexible discussion system available, the DCN Wireless Discussion System by Bosch offers the perfect solution for challenging locations such as multi-user venues and historical buildings. The wireless system lets owners of multi-use venues provide better, more effective service to their customers. With minimal time required for set-up or breakdown, multiple events can take place in sequence, enabling better and more effective use of space.

The DCN Wireless Discussion System has been intelligently designed to be as user friendly as possible, whether the user is a system operator, chairman or participant. Discussion units are comfortable and intuitive to use. The system is built with high-end finishing materials, giving it a timeless and discrete look. The design includes changeable rims (charcoal black, matte or glossy metal and silver), meaning that you can modify each discussion unit to fit in with its environment.

The Wireless Discussion Units communicate with the Wireless Access Point (WAP) by means of secure wireless communication with 128-bits AES Rijndael encryption. It uses one of the three non-overlapping-carriers in the 2.4 GHz band, which is license-free worldwide. The WAP is linked to the CCU using Bosch's proprietary optical network, which provides digital optical communication and power supply over a single cable.
For extra confidentiality an automatic blocking function prevents subscription of unauthorized Wireless Discussion Units to the system.

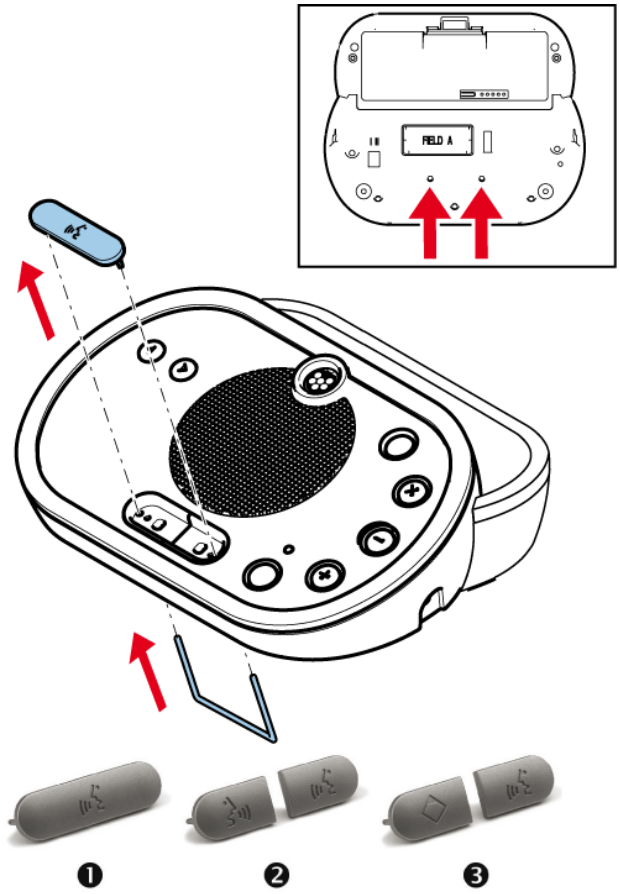
The Wireless Discussion Units ares available with dark colored bases. All units have a pluggable microphone (supplied separately) available in short and long stem length versions. The microphones have flexible stems for ease of use. Special rugged suitcases that accommodate complete systems are available for storage and transport.

The Wireless Discussion Units range from units with standard discussion functionality, to versions with a channel selector and voting that enable contributing delegates to take part in the decision making process, a vital aspect of modern conferencing. The Discussion units have 4 different operation modes. All Discussion units can be used either for normal delegates or as a chairman unit. The third mode is dual use, in which two delegates each have their own microphone button for individual identification. The fourth mode is auxiliary control. In this mode, the delegate has an extra button next to the microphone button, which can be used as an usher call, for example.

Wireless Discussion Units overview

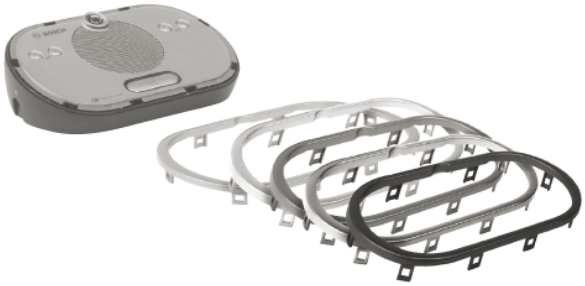
	Single delegate	Chairman	Dual use	Auxiliary	Pluggable microphone	Channel Selector	Voting
DCN-WD-D	•	•			•		
DCN-WDD-D	•	•	•	•	•		
DCN-WDV-D	•	•		•	•		•
DCN-WDCS-D	•	•			•	1	
DCN-WDDCS-D	•	•	•	•	•	2	
DCN-WDVCS-D	•	•		•	•	1	•

All Wireless Discussion Units are delivered with a single delegate button. For the chairman, dual and auxiliary mode two different sets of buttons are available: Dual use buttons and chairman buttons. The chairman buttons can also be used for auxiliary control. The buttons are easily removed using a special tool (supplied with the buttons). Sets of buttons must be ordered separately.



Replacing the buton
Button types:
1. Single use button
2. Dual use button
3. Chairman or Auxiliary control button

Discussion units with short microphones
All Wireless Discussion Units are delivered without the pluggable microphones. These microphones have to be ordered separately. Two different lengths of pluggable microphones are available. Rechargeable high capacity battery packs and rims need to be ordered separately as well. Several rims are available in different finishes. The rims can be mounted without any tools.



Rims to be mounted on the discussion unit
The rechargeable battery is the power source of the wireless discussion units. The battery is a high capacity Lithium-ion type, capable of providing up to 20 hours typical use from a full charge, while fully charging the battery pack from empty takes just 3 hours. The micro-processor controlled lithium-ion cells avoid the charge degradation issues associated with other rechargeable battery types.

High capacity rechargeable lithium-ion battery pack for Wireless Discussion Unit

DCN-WD-D Wireless Discussion Unit

Features

- Used as delegate or chairman unit
- Separate battery pack, easy to change and charge
- Advanced power saving techniques
- Low susceptibility to electromagnetic interference
- Auto microphone-off

To the participant the most important part of a conference system is the discussion unit. Bosch has built on the elegant design of the DCN Next Generation discussion units to create a new series of wireless discussion units with unrivalled looks and features.
The DCN-WD-D Wireless Discussion Unit enables participants to speak, register a request-to-speak, and listen to the speaker.

Functions

Speech intelligibility
Maximum speech intelligibility is guaranteed at all times. Operating in the 2.4 GHz (license free) band, the wireless discussion units produce crystal-clear sound due to a very high signal-to-noise ratio and antenna diversity. This means the signal is transmitted along different propagation paths, ensuring optimal receipt. The system is also protected against interference from mobile phones and other equipment that makes use of Bluetooth or microwave signals.

Security
Wireless communication means extra security considerations. The DCN Wireless system and discussion units therefore feature 128-bits AES encryption to prevent eavesdropping and unauthorized access. Encryption ensures the information within the system remains confidential.

Microphones
A socket is provided to connect the pluggable microphones which are available in short and long stem versions (DCN-MICS and DCN-MICL, to be ordered separately).

Headphones and loudspeakers
The unit also accommodates two headphone connections, so the speaker can be heard clearly even with excessive background noise. To prevent acoustic feedback the built-in loudspeaker is muted when the microphone is on. If enabled, the headphones volume is also automatically reduced to prevent acoustic feedback when the microphone is on.

Rims and buttons
Different rims are available to allow matching with the interior (DCN-DISR, to be ordered separately).
The unit can be used as:
- a single delegate unit
- a dual delegate unit
- a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately)
- a single delegate unit with auxiliary button (to be used as an usher call, for example).

Battery maintenance
Simple battery maintenance is essential in a wireless system. A unique feature of Bosch's wireless discussion units are the separate rechargeable battery packs (DCN-WLIION, to be ordered separately). These Lithium-ion battery packs can be removed and replaced in a matter of seconds, providing maximum flexibility in recharge scheduling.

Controls and Indicators
On front
- Microphone button with a red or green illuminated ring. Red indicates microphone is active, green indicates request-to-speak accepted
- Headphone volume control buttons

On rear
- Out-of-range indicator
- Battery low indicator

Under base
- Recessed ‘De-init’ switch
- Mode select switches (delegate, chairman, etc.)

Interconnections
- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) headphone sockets stereo jack type
- DC power input from DCN-WPS (accessible when battery pack is removed)

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz - 20 kHz
Headphone load impedance	>32 ohm <1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop
Dimensions (H x W x D)	
without microphone	61 x 190 x 160 mm (2.4 x 7.5 x 6.3 in)
Weight	
without battery with battery	485 g (1.07 lb) 700 g (1.54 lb)
Color top	Silver (RAL 9022)
Color base	Charcoal (PH 10736)

Ordering information

DCN-WD-D Wireless Discussion Unit
DCN Next Generation wireless discussion unit with pluggable microphone, dark-base. Microphone, rims, and batteries to be ordered separately.
Order number **DCN-WD-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-WLIION-D Battery Pack for Wireless Discussion Units
Battery pack for DCN Next Generation wireless discussion units, charcoal color, lithium-ion, 7.2 VDC, 4800 mAh.
Order number **DCN-WLIION-D**

DCN-WPS Power Supply for Wireless Discussion Units
Power supply for DCN Next Generation wireless discussion units. Not approved for some countries.
Order number **DCN-WPS**

DCN-FCWD10 Flight Case for 10 Wireless Discussion Units
Flight case for 10 DCN Next Generation wireless discussion units and 2 charging units, color light-gray.
Order number **DCN-FCWD10**

DCN-WDCS-D Wireless Discussion Unit with Channel Selector

Features

- Used as delegate or chairman unit
- Channel selector with number and abbreviated channel name
- Separate battery pack, easy to change and charge
- Advanced power saving techniques
- Low susceptibility to electromagnetic interference

To the participant the most important part of a conference system is the discussion unit. Bosch has built on the elegant design of the DCN Next Generation discussion units to create a new series of wireless discussion units with unrivalled looks and features.
The DCN-WDCS-D Wireless Discussion Unit with Channel selector enables participants to speak, register a request-to-speak, listen to the speaker or to an interpreter of their choice.

Functions

Speech intelligibility
Maximum speech intelligibility is guaranteed at all times. Operating in the 2.4 GHz (license free) band, the wireless discussion units produce crystal-clear sound due to a very high signal-to-noise ratio and antenna diversity. This means the signal is transmitted along different propagation paths, ensuring optimal receipt. The system is also protected against interference from mobile phones and other equipment that makes use of Bluetooth or microwave signals.

Security
Wireless communication means extra security considerations. The DCN Wireless system and discussion units therefore feature 128-bits AES encryption to prevent eavesdropping and unauthorized access. Encryption ensures the information within the system remains confidential.

Channel selector
The unit has a built-in channel selector that makes it suitable for discussions in which more than one language is used, and simultaneous interpretations are available. The channel selector includes two up-and-down channel select keys, and a display showing the number and the abbreviation of the languages. This enables rapid selection of the required language channel.

Microphones
A socket is provided to connect the pluggable microphones which are available in short and long stem versions (DCN-MICS and DCN-MICL, to be ordered separately).

Headphones and loudspeakers
The unit also accommodates two headphone connections, so the speaker can be heard clearly even with excessive background noise. To prevent acoustic feedback the built-in loudspeaker is muted when the microphone is on. If enabled, the headphone volume is also automatically reduced to prevent acoustic feedback when the microphone is on.

Rims and buttons
Different rims are available to allow matching with the interior (DCN-DISR, to be ordered separately).
The unit can be used as:
- a single delegate unit
- a dual delegate unit
- a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately)
- a single delegate unit with auxiliary button (to be used as an usher call, for example).

Battery maintenance
Simple battery maintenance is essential in a wireless system. A unique feature of Bosch's wireless discussion units is the separate rechargeable battery packs (DCN-WLIION, to be ordered separately). These Lithium-ion battery packs can be removed and replaced in a matter of seconds, providing maximum flexibility in recharge scheduling.

Controls and Indicators
On front
- Alphanumeric display for language channel selection with number and abbreviated channel name
- Channel up and down selection buttons
- Microphone button with a red or green illuminated ring:
  - Red indicates microphone is active
  - green indicates request-to-speak accepted
- Headphone volume control buttons

On rear
- Out-of-range indicator
- Battery low indicator

Under base
- Recessed ‘De-init’ switch
- Mode select switches (delegate, chairman, etc.)

Interconnections
- Socket for pluggable microphone

- Two 3.5 mm (0.14 in) headphone sockets stereo jack type
- DC power input from DCN-WPS (accessible when battery pack is removed)

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz - 20 kHz
Headphone load impedance	>32 ohm <1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop
Dimensions (H x W x D)	
without microphone	61 x 190 x 160 mm (2.4 x 7.5 x 6.3 in)
Weight	
without battery	495 g (1.10 lb)
with battery	710 g (1.57 lb)
Color top	Silver (RAL 9022)
Color base	Charcoal (PH 10736)

Ordering information

DCN-WDCS-D Wireless Discussion Unit with Channel Selector
DCN Next Generation wireless discussion unit with channel selector, pluggable microphone, dark base. Microphone, rims, and batteries to be ordered separately.
Order number **DCN-WDCS-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-WLIION-D Battery Pack for Wireless Discussion Units
Battery pack for DCN Next Generation wireless discussion units, charcoal color, lithium-ion, 7.2 VDC, 4800 mAh.
Order number **DCN-WLIION-D**

DCN-WPS Power Supply for Wireless Discussion Units
Power supply for DCN Next Generation wireless discussion units. Not approved for some countries.
Order number **DCN-WPS**

DCN-FCWD10 Flight Case for 10 Wireless Discussion Units
Flight case for 10 DCN Next Generation wireless discussion units and 2 charging units, color light-gray.
Order number **DCN-FCWD10**

DCN-WDD-D Wireless Dual Discussion Unit

Features

- Two separate headphone connections with individual volume control
- Useable as single/dual delegate or chairman unit
- Separate battery pack, easy to change and charge
- Advanced power saving techniques
- Low susceptibility to electromagnetic interference

To the participant the most important part of a conference system is the discussion unit. Bosch has built on the elegant design of the DCN Next Generation discussion units to create a new series of wireless discussion units with unrivalled looks and features.
The DCN-WDD-D Wireless Dual Discussion Unit enables participants to speak, register a request-to-speak, and listen to the speaker.

Functions

Speech intelligibility
Maximum speech intelligibility is guaranteed at all times. Operating in the 2.4 GHz (license free) band, the wireless discussion units produce crystal-clear sound due to a very high signal-to-noise ratio and antenna diversity. This means the signal is transmitted along different propagation paths, ensuring optimal receipt. The system is also protected against interference from mobile phones and other equipment that makes use of Bluetooth or microwave signals.

Security
Wireless communication means extra security considerations. The DCN Wireless system and discussion units therefore feature 128-bits AES encryption to prevent eavesdropping and unauthorized access. Encryption ensures the information within the system remains confidential.

Microphones
A socket is provided to connect the pluggable microphones which are available in short and long stem versions (DCN-MICS and DCN-MICL, to be ordered separately).

Headphones and loudspeakers
The unit also accommodates two separate headphone connections with individual volume control on either side of the unit, allowing one unit to serve two delegates. It can be converted to a full dual-use unit by replacing the microphone button with two separate buttons for individual microphone control and individual delegate identification (DCN-DISBDD dual-use buttons, to be ordered separately).
To prevent acoustic feedback the built-in loudspeaker is muted when the microphone is on. If enabled, the headphones volume is also automatically reduced to prevent acoustic feedback when the microphone is on.

Rims and buttons
Different rims are available to allow matching with the interior (DCN-DISR, to be ordered separately).
The unit can be used as:
- a single delegate unit
- a dual delegate unit
- a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately)
- a single delegate unit with auxiliary button (to be used as an usher call, for example).

Battery maintenance
Simple battery maintenance is essential in a wireless system. A unique feature of Bosch's wireless discussion units are the separate rechargeable battery packs (DCN-WLIION, to be ordered separately). These Lithium-ion battery packs can be removed and replaced in a matter of seconds, providing maximum flexibility in recharge scheduling.

Controls and Indicators
On front
- Microphone button with a red or green illuminated ring (red indicates microphone is active, green indicates request-to-speak accepted)*
- Two individual headphone volume control buttons

On rear
- Out-of-range indicator
- Battery low indicator

Under base
- Recessed ‘De-init’ switch
- Mode select switches (delegate, chairman, etc.)

Interconnections
- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) headphone sockets stereo jack type
- DC power input from DCN-WPS (accessible when battery is removed)

* When unit is used in Dual Delegate mode, this function is available individually.

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz - 20 kHz
Headphone load impedance	>32 ohm <1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop
Dimensions (H x W x D)	
without microphone	61 x 190 x 160 mm (2.4 x 7.5 x 6.3 in)
Weight	
without battery	500 g (1.10 lb)
with battery	715 g (1.57 lb)
Color top	Silver (RAL 9022)
Color base	Charcoal (PH 10736)

Ordering information

DCN-WDD-D Wireless Dual Discussion Unit
DCN Next Generation wireless discussion unit, dual delegate, pluggable microphone, dark base. Microphone, rims, and batteries to be ordered separately.
Order number **DCN-WDD-D**

Accessories

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-WLIION-D Battery Pack for Wireless Discussion Units
Battery pack for DCN Next Generation wireless discussion units, charcoal color, lithium-ion, 7.2 VDC, 4800 mAh.
Order number **DCN-WLIION-D**

DCN-WPS Power Supply for Wireless Discussion Units
Power supply for DCN Next Generation wireless discussion units. Not approved for some countries.
Order number **DCN-WPS**

DCN-FCWD10 Flight Case for 10 Wireless Discussion Units
Flight case for 10 DCN Next Generation wireless discussion units and 2 charging units, color light-gray.
Order number **DCN-FCWD10**

DCN-WDDCS-D Wireless Discussion Unit with Dual Channel Selector

Features

- Used as (dual) delegate or chairman unit
- Dual channel selector with number and abbreviated channel name
- Separate battery pack, easy to change and charge
- Advanced power saving techniques
- Low susceptibility to electromagnetic interference

To the participant the most important part of a conference system is the discussion unit. Bosch has built on the elegant design of the DCN Nex Generation discussion units to create a new series of wireless discussion units with unrivalled looks and features.
The DCN-WDDCS-D Wireless Discussion Unit with Dual Channel selector enables participants to speak, register a request-to-speak, listen to the speaker or to an interpreter of their choice.

Functions

Speech intelligibility
Maximum speech intelligibility is guaranteed at all times. Operating in the 2.4 GHz (license free) band, the wireless discussion units produce crystal-clear sound due to a very high signal-to-noise ratio and antenna diversity. This means the signal is transmitted along different propagation paths, ensuring optimal receipt. The system is also protected against interference from mobile phones and other equipment that makes use of Bluetooth or microwave signals.

Security
Wireless communication means extra security considerations. The DCN Wireless system and discussion units therefore feature 128-bits AES encryption to prevent eavesdropping and unauthorized access. Encryption ensures the information within the system remains confidential.

Channel selector
The unit has two built-in channel selectors that makes it suitable for discussions in which more than one language is used, and simultaneous interpretations are available. The channel selector includes two up-and-down channel select keys, and a display showing the number and the abbreviation of the languages. This enables rapid selection of the required language channel.

Microphones
A socket is provided to connect the pluggable microphones which are available in short and long stem versions (DCN-MICS and DCN-MICL, to be ordered separately).

Headphones and loudspeakers
The unit also accommodates two headphone connections, so the speaker can be heard clearly even with excessive background noise. To prevent acoustic feedback the built-in loudspeaker is muted when the microphone is on. If enabled, the headphone volume is also automatically reduced to prevent acoustic feedback when the microphone is on.

Rims and buttons
Different rims are available to allow matching with the interior (DCN-DISR, to be ordered separately).
The unit can be used as:
- a single delegate unit
- a dual delegate unit
- a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately)
- a single delegate unit with auxiliary button (to be used as an usher call, for example).

Battery maintenance
Simple battery maintenance is essential in a wireless system. A unique feature of Bosch's wireless discussion units is the separate rechargeable battery packs (DCNW-LIION, to be ordered separately). These Lithium-ion battery packs can be removed and replaced in a matter of seconds, providing maximum flexibility in recharge scheduling.

Controls and Indicators
On front
- Two alphanumeric displays for language channel selection with number and abbreviated channel name
- Two individual channel up and down selection buttons
- Two individual microphone buttons with a red or green illuminated ring:
  - Red indicates microphone is active
  - green indicates request-to-speak accepted*
- Two individual headphone volume control buttons

On rear
- Out-of-range indicator
- Battery low indicator

Under base
- Recessed ‘De-init’ switch
- Mode select switches (delegate, chairman, etc.)

Interconnections
- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) headphone sockets stereo jack type
- DC power input from DCN-WPS (accessible when battery pack is removed)

* When unit is used in Dual Delegate mode, this function is available individually.

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz - 20 kHz
Headphone load impedance	>32 ohm <1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop
Dimensions (H x W x D)	
without microphone	61 x 190 x 160 mm (2.4 x 7.5 x 6.3 in)
Weight	
without battery	515 g (1.14 lb)
with battery	730 g (1.61 lb)
Color top	Silver (RAL 9022)
Color base	Charcoal (PH 10736)

Ordering information

DCN-WDDCS-D Wireless Discussion Unit with Dual Channel Selector
DCN Next Generation wireless discussion unit with dual-channel selector, pluggable microphone, dark base. Microphone, rims, and batteries to be ordered separately.
Order number **DCN-WDDCS-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-WLIION-D Battery Pack for Wireless Discussion Units
Battery pack for DCN Next Generation wireless discussion units, charcoal color, lithium-ion, 7.2 VDC, 4800 mAh.
Order number **DCN-WLIION-D**

DCN-WPS Power Supply for Wireless Discussion Units
Power supply for DCN Next Generation wireless discussion units. Not approved for some countries.
Order number **DCN-WPS**

DCN-FCWD10 Flight Case for 10 Wireless Discussion Units
Flight case for 10 DCN Next Generation wireless discussion units and 2 charging units, color light-gray.
Order number **DCN-FCWD10**

DCN-WDV-D Wireless Discussion Unit with Voting

Features

- Five voting buttons
- Usable as delegate or chairman unit
- Separate battery pack, easy to change and charge
- Advanced power saving techniques
- Low susceptibility to electromagnetic interference

To the participant the most important part of a conference system is the discussion unit. Bosch has built on the elegant design of the DCN Next Generation discussion units to create a new series of wireless discussion units with unrivalled looks and features.
The DCN-WDV-D Wireless Discussion Unit with Voting enables participants to speak, register a request-to-speak, listen to the speaker, and vote.

Functions

Speech intelligibility
Maximum speech intelligibility is guaranteed at all times. Operating in the 2.4 GHz (license free) band, the wireless discussion units produce crystal-clear sound due to a very high signal-to-noise ratio and antenna diversity. This means the signal is transmitted along different propagation paths, ensuring optimal receipt. The system is also protected against interference from mobile phones and other equipment that makes use of Bluetooth or microwave signals.

Security
Wireless communication means extra security considerations. The DCN Wireless system and discussion units therefore feature 128-bits AES encryption to prevent eavesdropping and unauthorized access. Encryption ensures the information within the system remains confidential.

Microphones
A socket is provided to connect the pluggable microphones which are available in short and long stem versions (DCN-MICS and DCN-MICL, to be ordered separately).

Voting
The unit has five voting buttons. The yellow indicator rings around the voting buttons confirm vote selections.

Headphones and loudspeakers
The unit also accommodates two headphone connections, so the speaker can be heard clearly even in situations with excessive background noise.
To prevent acoustic feedback the built-in loudspeaker is muted when the microphone is on. If enabled, the headphones volume is also automatically reduced to prevent acoustic feedback when the microphone is on.

Rims and buttons
Different rims are available to allow matching with the interior (DCN-DISR, to be ordered separately).
The unit can be used as:
- a single delegate unit
- a dual delegate unit
- a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately)
- a single delegate unit with auxiliary button (to be used as an usher call, for example).

The unit has five voting buttons. The yellow indicator rings around the voting buttons confirm vote selections.

Battery maintenance
Simple battery maintenance is essential in a wireless system. A unique feature of Bosch's wireless discussion units are the separate rechargeable battery packs (DCN-WLIION, to be ordered separately). These Lithium-ion battery packs can be removed and replaced in a matter of seconds, providing maximum flexibility in recharge scheduling.

Controls and Indicators
On front
- Five voting buttons with indicator rings around the buttons
- Unit activity / delegate presence indicator
- Microphone button with a red or green illuminated ring. Red indicates microphone is active, green indicates request-to-speak accepted
- Headphone volume control buttons

On rear
- Out-of-range indicator
- Battery low indicator

Under base
- Recessed ‘De-init’ switch
- Mode select switches (delegate, chairman, etc.)

Interconnections
- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) headphone sockets stereo jack type
- DC power input from DCN-WPS (accessible when battery is removed)

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz - 20 kHz
Headphone load impedance	>32 ohm <1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop
Dimensions (H x W x D)	
without microphone	61 x 190 x 160 mm (2.4 x 7.5 x 6.3 in)
Weight	
without battery	505 g (1.11 lb)
with battery	720 g (1.58 lb)
Color top	Silver (RAL 9022)
Color base	Charcoal (PH 10736)

Ordering information

DCN-WDV-D Wireless Discussion Unit with Voting
DCN Next Generation wireless discussion unit with voting, pluggable microphone, dark base. Microphone, rims, and batteries to be ordered separately.
Order number **DCN-WDV-D**

Accessories

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-WLIION-D Battery Pack for Wireless Discussion Units
Battery pack for DCN Next Generation wireless discussion units, charcoal color, lithium-ion, 7.2 VDC, 4800 mAh.
Order number **DCN-WLIION-D**

DCN-WPS Power Supply for Wireless Discussion Units
Power supply for DCN Next Generation wireless discussion units. Not approved for some countries.
Order number **DCN-WPS**

DCN-FCWD10 Flight Case for 10 Wireless Discussion Units
Flight case for 10 DCN Next Generation wireless discussion units and 2 charging units, color light-gray.
Order number **DCN-FCWD10**

DCN-WDVCS-D Wireless Discussion Unit with Voting and Channel Selector

Features

- Used as delegate or chairman unit
- Channel selector with number and abbreviated channel name
- Five voting buttons
- Separate battery pack, easy to change and charge
- Advanced power saving techniques

To the participant the most important part of a conference system is the discussion unit. Bosch has built on the elegant design of the DCN Next Generation discussion units to create a new series of wireless discussion units with unrivalled looks and features.
The DCN-WDVCS-D Wireless Discussion Unit with Voting and Channel selector enables participants to speak, register a request-to-speak, listen to the speaker or to an interpreter of their choice, and vote.

Functions

Speech intelligibility
Maximum speech intelligibility is guaranteed at all times. Operating in the 2.4 GHz (license free) band, the wireless discussion units produce crystal-clear sound due to a very high signal-to-noise ratio and antenna diversity. This means the signal is transmitted along different propagation paths, ensuring optimal receipt. The system is also protected against interference from mobile phones and other equipment that makes use of Bluetooth or microwave signals.

Security
Wireless communication means extra security considerations. The DCN Wireless system and discussion units therefore feature 128-bits AES encryption to prevent eavesdropping and unauthorized access. Encryption ensures the information within the system remains confidential.

Channel selector
The unit has a built-in channel selector that makes it suitable for discussions in which more than one language is used, and simultaneous interpretations are available. The channel selector includes two up-and-down channel select keys, and a display showing the number and the abbreviation of the languages. This enables rapid selection of the required language channel.

Microphones
A socket is provided to connect the pluggable microphones which are available in short and long stem versions (DCN-MICS and DCN-MICL, to be ordered separately).

Headphones and loudspeakers
The unit also accommodates two headphone connections, so the speaker can be heard clearly even with excessive background noise. To prevent acoustic feedback the built-in loudspeaker is muted when the microphone is on. If enabled, the headphone volume is also automatically reduced to prevent acoustic feedback when the microphone is on.

Rims and buttons
Different rims are available to allow matching with the interior (DCN-DISR, to be ordered separately).
The unit can be used as:
- a single delegate unit
- a dual delegate unit
- a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately)
- a single delegate unit with auxiliary button (to be used as an usher call, for example).

The unit has five voting buttons. The yellow indicator rings around the voting buttons confirm vote selections.

Battery maintenance
Simple battery maintenance is essential in a wireless system. A unique feature of Bosch's wireless discussion units is the separate rechargeable battery packs (DCN-WLIION, to be ordered separately). These Lithium-ion battery packs can be removed and replaced in a matter of seconds, providing maximum flexibility in recharge scheduling.

Controls and Indicators
On front
- Alphanumeric displays for language channel selection with number and abbreviated channel name
- Channel up and down selection buttons
- Five voting buttons with indicator rings around the buttons
- Unit activity / delegate presence indicator
- Microphone button with a red or green illuminated ring:
  - Red indicates microphone is active
  - green indicates request-to-speak accepted
- Headphone volume control buttons

On rear
- Out-of-range indicator
- Battery low indicator

Under base

- Recessed 'De-init' switch
- Mode select switches (delegate, chairman, etc.)

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) headphone sockets stereo jack type

DC power input from DCN-WPS (accessible when battery pack is removed)

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz - 20 kHz
Headphone load impedance	>32 ohm <1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop
Dimensions (H x W x D)	
without microphone	61 x 190 x 160 mm (2.4 x 7.5 x 6.3 in)
Weight	
without battery	520 g (1.15 lb)
with battery	735 g (1.62 lb)
Color top	Silver (RAL 9022)
Color base	Charcoal (PH 10736)

Ordering information

DCN-WDVCS-D Wireless Discussion Unit with Voting and Channel Selector
DCN Next Generation wireless discussion unit with voting and channel selector, pluggable microphone, dark base. Microphone, rims, and batteries to be ordered separately.
Order number **DCN-WDVCS-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-WLIION-D Battery Pack for Wireless Discussion Units
Battery pack for DCN Next Generation wireless discussion units, charcoal color, lithium-ion, 7.2 VDC, 4800 mAh.
Order number **DCN-WLIION-D**

DCN-WPS Power Supply for Wireless Discussion Units
Power supply for DCN Next Generation wireless discussion units. Not approved for some countries.
Order number **DCN-WPS**

DCN-FCWD10 Flight Case for 10 Wireless Discussion Units
Flight case for 10 DCN Next Generation wireless discussion units and 2 charging units, color light-gray.
Order number **DCN-FCWD10**

DCN-WLIION-D Battery Pack for Wireless Discussion Units

Features

- Long service life without charge degradation
- 20 hours typical use from a full charge
- Fully recharges in 3 hours
- Built-in microprocessor controls charging cycle
- Lithium-ion technology

This rechargeable battery is the power source of the wireless discussion units.
The battery is a high capacity Lithium-ion type, capable of providing up to 20 hours typical use from a full charge. Fully charging the DCN-WLIION from empty takes just 3 hours.
Lithium-ion cells avoid the charge degradation issues associated with other rechargeable battery types. This offers maximum flexibility for scheduling recharges (no requirement to fully discharge batteries before recharging).
The 'intelligent' battery has a built-in microprocessor to control charging current and prevent overloading.

Functions

Controls and Indicators
- Charge capacity LEDs and push-to-test button

Interconnections
- Power / charge connector

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Output Voltage	7.2 VDC
Capacity	4800 mAh

Mechanical

Dimensions (H x W x D)	61.5 x 136 x 22 mm (2.4 x 5.5 x 0.9 in)
Weight	215 g (0.47 lb)
Color	Charcoal (PH 10736)

Ordering information

DCN-WLIION-D Battery Pack for Wireless Discussion Units
Battery pack for DCN Next Generation wireless discussion units, charcoal color, lithium-ion, 7.2 VDC, 4800 mAh.
Order number **DCN-WLIION-D**

Accessories

DCN-WCH05 Charger for 5 Battery Packs
DCN Next Generation charger for 5 Battery Packs, charcoal color, recharges up to 5 DCN-WLIION battery packs.
Order number **DCN-WCH05**

DCN-WCH05 Charger for 5 Battery Packs

Features

- Simultaneous charging of up to 5 battery packs
- Recharges from empty in 3 hours
- Loop-through mains connector
- Auto-ranging PSU, 100 – 240 VAC

This unit can simultaneously re-charge up to 5 DCN-WLIION battery packs. The charging status of each pack is shown on individual charge capacity indicator LEDs. The unit is suitable for tabletop use, or can be wall-mounted.
The loop-through mains voltage connector allows a maximum number of charging units to be connected in series to share from the same mains outlet:

- A maximum 5 chargers can be connected in series for 100 - 127 VAC, 50 - 60 Hertz regions

A maximum 10 chargers can be connected in series for 220 - 240 VAC, 50 - 60 Hertz regions.

Functions

Controls and Indicators

- Charge capacity indicator LEDs on each bin
- Mains power indicator LED

Interconnections

- Mains supply connector
- Loop-through mains connector

Battery pack charging connector

Technical specifications

Electrical

Supply Voltage	100 - 240 VAC +/- 10 % 50 – 60 Hz
Maximum power consumption	190 W

Mechanical

Dimensions (H x W x D)	340 x 195 x 82 mm (13.4 x 7.6 x 3.2 in)
Weight (without batteries)	1.4 kg (3.08 lb)
Color	Charcoal (PH 10736)

Ordering information

DCN-WCH05 Charger for 5 Battery Packs
DCN Next Generation charger for 5 Battery Packs, charcoal color, recharges up to 5 DCN-WLIION battery packs.
Order number **DCN-WCH05**

DCN-WCH05-US Charger for 5 Battery Packs (US)
DCN Next Generation charger for 5 Battery Packs charcoal color, recharges up to 5 DCN-WLIION battery packs. US version.
Order number **DCN-WCH05-US**

DCN-MICS/L Pluggable Microphone Short/Long Stem

Features

- Uni-directional microphone on adjustable stem
- Built-in plop and windshield

The innovative, stylish and ergonomically designed microphone with an adjustable stem simply plugs directly into a Discussion unit, Concentus, flush-mounted Microphone Connection panels or Interpreter desk. It has a uni-directional response for optimum performance even in noisy conditions, and has low susceptibility to interference from mobile phones.

Functions

Controls and Indicators

- Red or green illuminator. Red indicates microphone is active, green indicates request-to-speak accepted

Interconnections

- Connector to plug and fasten the microphone

Technical specifications

Mechanical

Mounting	Plug and fasten into Discussion units, Concentus, flush mounted Microphone connection panels and Interpreter desks
Length	
DCN-MICS / DCN-MICS-D	310 mm (12.2 in)
DCN-MICL / DCN-MICL-D	480 mm (18.9 in)
Weight	
DCN-MICS / DCN-MICS-D	100 g (0.22 lb)
DCN-MICL / DCN-MICL-D	115 g (0.25 lb)
Color top	
DCN-MICS / DCN-MICL	Silver (RAL 9022)
DCN-MICS-D / DCN-MICL-D	Dark (graphite gray)

Ordering information

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-DISBDD Buttons Dual Use (10 sets)

DCN-DISBDD buttons for Dual Use Discussion Units replace the single microphone button on a discussion unit when used in dual delegate mode.

Technical specifications

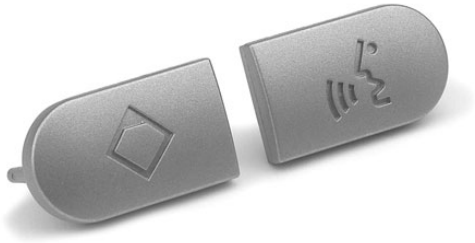
Mechanical

Mounting	Click and fit on any Discussion unit
Color	Silver (RAL 9022)

Ordering information

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-DISBCM Buttons Chairman (10 sets)



DCN-DISBCM buttons for Chairman Discussion Units replace the single microphone button on a discussion unit when used in chairman mode. These buttons can also be used for the discussion unit in auxiliary control mode.

Technical specifications

Mechanical

Mounting	Click and fit on any Discussion unit
Color	Silver (RAL 9022)

Ordering information

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-UPTK Upgrade Toolkit

Features

- Easy upgrade of the wireless discussion unit
- USB powered and interfaced
- Easy to install and use
- Saves functional compatibility issues between DCN wireless discussion units

The DCN-UPTK Upgrade Toolkit is used to upgrade software of a single DCN wireless discussion unit (DCN-WDx).
Upgrade software is controlled via the DCN Download & License Tool.
The DCN-UPTK Upgrade Toolkit, is USB powered and is installer / user friendly. It consists of a small box with the required built-in hardware and software interfaces, plus one standard USB-connection cable and one DCN-wireless-discussion-unit-connection-cable.

Functions

Controls and Indicators

- Green LED, next to USB connector, indicates USB power for DCN-UPTK available
- Green LED, next to 14-pole connector, indicates the DCN-WDx is powered and switched on

Interconnections

- USB (2.0 compatible) standard connector and cable to PC
- 14-pole flat-cable connector and cable to the DCN wireless discussion unit

Certifications and approvals

Safety according	IEC 60950
EMC according	EN 55022 ITE
	EN 55024 ITE

Region	Certification
Europe	CE

Parts included

Quantity	Components
1	USB connection cable
1	WDU connection cable

Technical specifications

Electrical

Power supply DCN-UPTK	USB powered
Power supply wireless discussion units	DCN-WLIION or
	DCN-WPS

Mechanical

Dimensions (H x W x D)	70 x 120 x 35 mm (2.76 x 4.72 x 1.38 in)
Weight	400 g (0.88 lb)
Color	Charcoal 10736

Ordering information

DCN-UPTK Upgrade Toolkit
DCN Next Generation upgrade toolkit for upgrading the software of a DCN wireless discussion unit.
Order number **DCN-UPTK**

DCN-RCWD10 Roller Case for 10 Wireless Discussion Units

Features

- Holds 10 wireless discussion units, including microphones
- Also holds 2 battery chargers and 10 batteries
- Side panel, which must be removed during charging, can be stored in the top lid
- Easily transportable on fitted wheels
- Robust construction with reinforced corners

The DCN-RCWD10 Roller Case accommodates up to 10 wireless discussion units with fitted microphone, long or short stem (one extra storage position can be used for a spare unit).
The case can also hold 2 DCN-WCH05 charging units which slot into place and are easily accessed by removing the side panel (always leave this panel off when charging the batteries).
Fitted wheels allow for easy transportation.

Parts included

Quant.	Component
1	DCN-RCWD10 Roller Case for 10 Wireless Discussion
6	Screws to fix mounting brackets of chargers

Technical specifications

Mechanical

Dimensions (H x W x D)	695 x 765 x 500 mm (27.4 x 30.1 x 19.7 in)
Weight (empty)	26.4 kg (58.2 lb)
Color	Light grey

Ordering information

DCN-RCWD10 Roller Case for 10 Wireless Discussion Units
DCN Next Generation roller case for 10 wireless discussion units, light gray. Can hold 10 wireless discussion units and 2 charging units.
Order number **DCN-RCWD10**

2

DCN-FCWD10 Flight Case for 10 Wireless Discussion Units

Features

- Holds 10 wireless discussion units and microphones
- Also holds 2 battery chargers and 10 batteries
- Easy to move using the handgrip and wheels
- Robust construction with reinforced corners
- Shaped foam interior simplifies packing

The DCN-FCWD10 Flight Case accommodates up to 10 wireless discussion units complete with battery packs and microphones (long or short stems).
The case can also hold 2 DCN-WCH05 charging units and is provided with an extra handgrip and wheels for easy transportation.

Technical specifications

Mechanical

Dimensions (H x W x D)	820 x 500 x 300 mm (32.3 x 19.7 x 12 in)
Weight (empty)	13.8 kg (30.4 lb)
Color	Light grey

Ordering information

DCN-FCWD10 Flight Case for 10 Wireless Discussion Units
Flight case for 10 DCN Next Generation wireless discussion units and 2 charging units, color light-gray.
Order number **DCN-FCWD10**

DCN-DISR Rims for Discussion Units

A rim completes the discussion units. A variety of rims with different finishes are available to allow matching with any interior.

Technical specifications

Mechanical

Mounting	Click and fit on any discussion unit
Color base	
DCN-DISRH-SR	Silver (RAL 9022) high gloss
DCN-DISR-SR	Silver (RAL 9022)
DCN-DISR-D	Charcoal (PH 10736)
DCN-DISRMH	High gloss metal
DCN-DISRMS	Semi gloss metal

Ordering information

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-WPS Power Supply for Wireless Discussion Units

Features

- Powers wireless discussion units if no battery pack is present

The DCN-WPS power supply enables wireless discussion units to be used without a battery.
The DCN-WPS does not provide any battery charging capability (a DCN-WCH05 charging unit is required). The unit comes complete with a 1.5 m cable and international mains supply connectors (Euro, UK, Rest of World).

Notice
For countries where the EU- and UK-connector cannot be used, attach the 'Rest of World' connector to your own supplied cable (this cable must have a connector according to IEC 60 320 part 1 version C7 on the DCN-WPS-side; and a commonly used connector for your country on the other side).

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Rated input voltage	100-240 VAC (50 – 60 Hz), 150 mA
Rated output voltage	9 VDC (500 mA)

Mechanical

Dimensions (H x W x D)	65 x 57 x 28 mm (2.56 x 2.24 x 1.10 in)
Weight (per package)	approx. 100 g (0.22 lb)
Color	Black

Ordering information

DCN-WPS Power Supply for Wireless Discussion Units
Power supply for DCN Next Generation wireless discussion units. Not approved for some countries.
Order number **DCN-WPS**

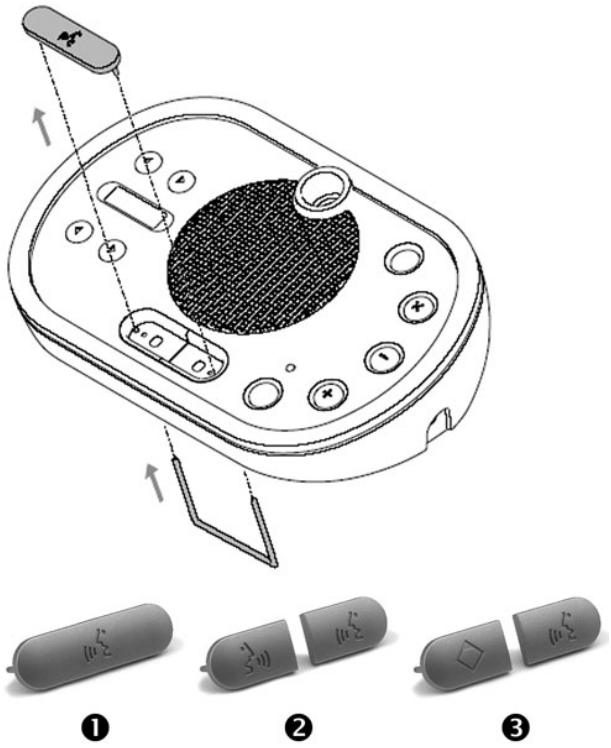
Wired Discussion Units

Wired Discussion units
Discussion units are typically used for smaller and medium sized conferences. The units are ideal when a flexible system configuration or portable conference facilities are required. All units are easily plugged into or removed from the system cabling, which enables the configuration to be set up quickly and efficiently. The Discussion unit is available with light- or dark colored bases. Most units have a pluggable microphone (supplied separately) available in short and long stem length versions. The microphones have flexible stems for ease of use. The unit can be free-standing or fixed using mounting screws. The units can also be flush mounted in more permanent installations. Special rugged suitcases that accommodate complete systems are available for storage and transport. The units are connected in a simple daisy-chain configuration. Alternatively, they can be connected using a single cable and a trunk splitter to link the units to the system cabling, with connectors neatly hidden in the units themselves. This 'one cable' aspect of the DCN Next Generation system means there is no untidy mess of wires at the back of the units. It is especially advantageous for TV coverage, where the backs of the units are on show. The Discussion units range from standard Discussion with a fixed microphone to Discussion units with pluggable microphone, a channel selector and voting that enable contributing delegates to take part in the decision making process, a vital aspect of modern conferencing. The Discussion units have 4 different operation modes. All Discussion units can be used either for normal delegates or as a chairman unit. The third mode is dual use, in which two delegates each have their own microphone button for individual identification. The fourth mode is auxiliary control. In this mode, the delegate has an extra button next to the microphone button, which can be used as an usher call, for example.

Discussion units overview

	Single delegate	Chairman	Dual use	Auxiliary	Pluggable microphone	Channel Selector	Voting
DCN-DISS	•	•					
DCN-DISL	•	•					
DCN-DISD	•	•	•	•	•		
DCN-DISCS	•	•			•	1	
DCN-DISDCS	•	•	•	•	•	2	
DCN-DISV	•	•		•	•		•
DCN-DISVCS	•	•		•	•	1	•

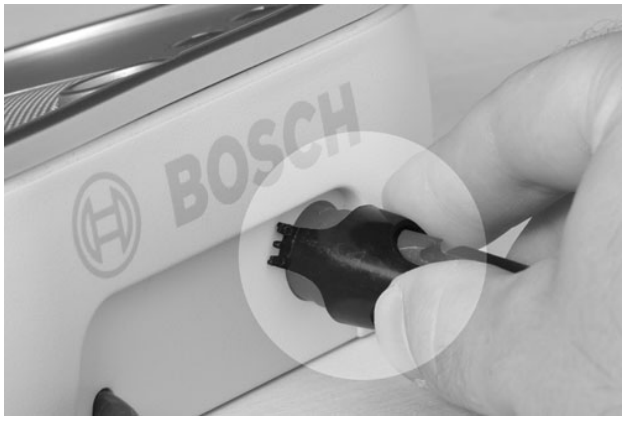
All units are delivered with a single delegate button. For the chairman, dual and auxiliary mode two different sets of buttons are available: Dual use buttons and chairman buttons. The chairman buttons can also be used for auxiliary control. The buttons are easily removed using a special tool (supplied with the buttons). Sets of buttons must be ordered separately.



Replacing the button
Button types:
1. Single use button
2. Dual use button
3. Chairman or Auxiliary control button

Discussion units with long and short microphones
The Discussion units with pluggable microphone are delivered without microphones. These microphones have to be ordered separately. Two different lengths of pluggable microphones are available.
All Discussion units are supplied without rims. The rims must be ordered separately. Several rims are available in different finishes. The rims can be mounted without any tools.

Rims to be mounted on the discussion unit
To secure the loop trough cable of the Discussion unit, cable clamps can be used.



Mounting the cable clamp

DCN-DISS / DCN-DISL Discussion Unit with fixed Microphone

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Fixed microphone
- Built-in loudspeaker
- Usable as delegate unit or chairman unit

The Discussion Unit with fixed Microphone enables participants to speak, register a request-to-speak and listen to the speaker. The microphone stem is flexible. The unit also accommodates two headphone connections, so the speaker can be heard clearly even in situations with excessive background noise. The built-in loudspeaker is muted when the microphone is on to prevent acoustic feedback. Rims are available in a range of colors to match the interior (DCN-DISR, to be ordered separately).

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when the microphone is on)
- The unit can be used a delegate unit or as a chairman unit (DCN-DISBCM chairman buttons to be ordered separately).
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately).
- The unit is available with two different microphone lengths and in light and dark colored bases.

Controls and Indicators

- Microphone with red or green indicator
- Microphone button with a red, green or yellow illuminated ring. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Headphone volume control buttons
- Recessed 'De-init' switch

Interconnections

- Two 3.5 mm (0.14 in) stereo jack type headphone sockets
- 2 m (78.7 in) cable terminated within a molded six-pole circular connector.
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 ohm < 1kohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	61 x 190 x 116 mm (2.4 x 7.5 x 4.6 in)
Flush mounted	6 x 190 x 120 mm (0.2 x 7.5 x 4.7 in)
Microphone lengths	
DCN-DISS	300 mm (11.8 in)
DCN-DISL	470 mm (18.5 in)
Weight	
DCN-DISS	880 g (1.94 lb)
DCN-DISL	895 g (1.97 lb)
Color top	Silver (RAL 9022)
Color base	
DCN-DISS-L	Light Grey (RAL 000 7500)
DCN-DISS-D	Charcoal (PH 10736)
DCN-DISL-D	Charcoal (PH 10736)

Ordering information

DCN-DISS-L Discussion Short Microphone Light
DCN Next Generation discussion unit with short microphone, light base. Rims to be ordered separately.
Order number **DCN-DISS-L**

DCN-DISS-D Discussion Short Microphone Dark
DCN Next Generation discussion unit with short microphone, dark base. Rims to be ordered separately.
Order number **DCN-DISS-D**

DCN-DISL-L Discussion Long Microphone Light
DCN Next Generation discussion unit with long microphone, light base. Rims to be ordered separately.
Order number **DCN-DISL-L**

DCN-DISL-D Discussion Long Microphone Dark
DCN Next Generation discussion unit with long microphone, dark base. Rims to be ordered separately.
Order number **DCN-DISL-D**

Accessories

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DISD Basic Discussion Unit

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Pluggable microphone
- Built-in loudspeaker
- Usable as delegate unit, dual delegate unit, chairman unit or single delegate unit with auxiliary button

The Basic Discussion Unit enables participants to speak, register a request-to-speak and listen to the speaker. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately).
The unit also accommodates two separate headphone connections with individual volume control on either side of the unit, allowing one unit to serve two delegates. It can be converted to a full dual-use unit by replacing the microphone button with two separated microphone buttons for individual microphone control and individual delegate identification (DCN-DISBDD dual-use buttons, to be ordered separately).

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when the microphone is on). When unit is used in Dual Delegate mode, this function is available individually
- Built-in loudspeaker speaker is muted when the microphone is on to prevent acoustic feedback
- Unit can be used as a single delegate unit, as a dual delegate unit, as a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately) or as a single delegate unit with auxiliary button
- Different rims are available to allow matching with the interior (DCN-DISR, to be ordered separately)
- The versatile auxiliary button can be used as an usher call, for example
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)
- Unit is available in light and dark colored bases

Controls and Indicators

- Microphone button with a red, green or yellow illuminated ring. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP' (when unit is used in Dual Delegate mode, this function is available individually)
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Two individual headphone volume control buttons
- Recessed 'De-init' switch

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) stereo jack type headphone sockets
- 2 m (78.7 in) cable terminated within a molded six-pole circular connector.
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 ohm < 1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	61 x 190 x 116 mm (2.4 x 7.5 x 4.6 in)
Flush mounted	6 x 190 x 120 mm (0.2 x 7.5 x 4.7 in)
Weight	800 g (1.76 lb)
Color top	Silver (RAL 9022)
Color base	
DCN-DISD-L	Light Grey (RAL 000 7500)
DCN-DISD-D	Charcoal (PH 10736)

Ordering information

DCN-DISD-L Discussion Light
DCN Next Generation discussion unit with pluggable microphone, light base. Microphone and rims to be ordered separately.
Order number **DCN-DISD-L**

DCN-DISD-D Discussion Dark
DCN Next Generation discussion unit with pluggable microphone, dark base. Microphone and rims to be ordered separately.
Order number **DCN-DISD-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DISCS Discussion Unit with Channel Selector

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Pluggable microphone
- Channel selector with number and abbreviated channel name
- Built-in loudspeaker

The Discussion Unit with Channel Selector enables participants to speak, register a request-to-speak and listen to the speaker. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The unit has a built-in channel selector that makes it suitable for discussions in which more than one language is used and simultaneous interpretations are available. The channel selector includes two up and down channel select keys and a display showing the number and the abbreviation of the languages, enabling rapid selection of the required language channel.

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when microphone is on)
- The built-in loudspeaker speaker is muted when the microphone is on to prevent acoustic feedback.
- A variety of rims (DCN-DISR, to be ordered separately) are available, so the unit can be matched to the interior
- The unit can be used a delegate unit or as a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately)
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)
- The unit is available in light and dark colored bases

Controls and Indicators

- Alphanumeric display for language channel selection with number and abbreviated channel name
- Socket for pluggable microphones (DCN-MICS or DCN-MICL)
- Microphone button with a red, green or yellow illuminated ring. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Headphones have volume control buttons
- Recessed 'De-init' switch

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) stereo jack type headphones sockets
- 2 m (78.7 in) cable terminated with in a molded six-pole circular connector.
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 ohm < 1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	61 x 190 x 116 mm (2.4 x 7.5 x 4.6 in)
Flush mounted	6 x 190 x 120 mm (0.2 x 7.5 x 4.7 in)
Weight	800 g (1.76 lb)
Color top	Silver (RAL 9022)
Color base	
DCN-DISCS-L	Light Grey (RAL 000 7500)
DCN-DISCS-D	Charcoal (PH 10736)

Ordering information

DCN-DISCS-L Discussion Channel Selector Light
Next Generation discussion unit with channel selector, pluggable microphone, light base. Microphone and rims to be ordered separately.
Order number **DCN-DISCS-L**

DCN-DISCS-D Discussion Channel Selector Dark
DCN Next Generation discussion unit with channel selector, pluggable microphone, dark base. Microphone and rims to be ordered separately.
Order number **DCN-DISCS-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DISDCS Discussion Unit with Dual Channel Selector

Features

- Low susceptibility to mobile phones
- Compact, attractive and ergonomic design
- Pluggable microphone
- Two channel selectors with number and abbreviated channel name
- Built-in loudspeaker

The Discussion Unit with Dual Channel Selectors enables participants to speak, register a request-to-speak and listen to the speaker. A socket is provided to connect a pluggable microphone. The unit has two built-in channel selectors with headphone connections with individual volume controls on either side of the unit, allowing one unit to serve two delegates. The channel selectors make it suitable for discussions in which more than one language is used and simultaneous interpretations are available. Each of the channel selectors includes up and down channel select keys and a display showing the number and the abbreviation of the channel name, enabling rapid selection of the required language channel.

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when the microphone is on). When unit is used in Dual Delegate mode, this function is available individually
- The unit can be a full dual use unit by replacing the microphone button with two separated microphone buttons for individual microphone control and individual delegate identification (DCN-DISBDD dual use buttons, to be ordered separately)
- The built-in loudspeaker is muted when the microphone is on to prevent acoustic feedback.
- Two lengths of microphones are available (DCN-MICS and DCN-MICL, to be ordered separately)
- Different colored rims are available to allow matching with the interior, (DCN-DISR, to be ordered separately)
- The unit can be used as a single delegate unit, as a dual delegate unit, as a chairman unit (DCN-DISBCM chairman buttons, to be ordered separately) or as a single delegate unit with an auxiliary button
- The versatile auxiliary button can be used as an usher call, for example
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)
- The unit is available in light and dark colored bases

Controls and Indicators

- Two alphanumeric displays for language channel selection with number and abbreviated channel name
- Microphone button with a red, green or yellow illuminated ring. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'(when unit is used in Dual Delegate mode, this function is available individually)
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Two individual headphone volume control buttons
- Recessed 'De-init' switch

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) stereo jack type headphones sockets
- 2 m (78.7 in) cable terminated within a molded six-pole circular connector.
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 ohm < 1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	61 x 190 x 116 mm (2.4 x 7.5 x 4.6 in)
Flush mounted	6 x 190 x 120 mm (0.2 x 7.5 x 4.7 in)
Weight	800 g (1.76 lb)
Color top	Silver (RAL 9022)

Color base	
DCN-DISDCS-L DCN-DISDCS-D	Light Grey (RAL 000 7500) Charcoal (PH 10736)

Ordering information

DCN-DISDCS-L Discussion Dual Channel Selector Light
DCN Next Generation discussion unit with dual-channel selector, pluggable microphone, light base. Microphone and rims to be ordered separately.
Order number **DCN-DISDCS-L**

DCN-DISDCS-D Discussion Dual Channel Selector Dark
DCN Next Generation discussion unit with dual-channel selector, pluggable microphone, dark base. Microphone and rims to be ordered separately.
Order number **DCN-DISDCS-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DISV Discussion Unit with Voting

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Pluggable microphone
- Five voting buttons
- Built-in loudspeaker

This Discussion Unit with Voting enables participants to speak, register a request-to-speak, listen to the speaker and vote. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The unit has five voting buttons for all types of voting. The yellow indicator rings around the voting buttons are used to prompt users to register their presence, to start voting and to confirm their votes. When the unit's attendance LED is yellow, it indicates the delegate is present.

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when the microphone is on)
- The unit accommodates two headphone connections, so the speaker can be heard clearly even in situations with excessive background noise
- The built-in loudspeaker is muted when the microphone is on to prevent acoustic feedback
- A variety of rims are available, so the unit can be matched to the interior. (DCN-DISR, to be ordered separately).
- The unit can be used a delegate unit, as a chairman unit (DCN-DISBCM chairman buttons to be ordered separately) or as a delegate unit with auxiliary button. The auxiliary button is a versatile function, which can be used as an usher call for example
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)
- The unit is available in light and dark colored bases

Controls and Indicators

- Five voting buttons with indicator rings around the buttons
- Unit activity/delegate presence indicator
- Microphone button with a red, green or yellow illuminated ring. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Headphone volume control buttons
- Recessed 'De-init' switch

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) stereo jack type headphone sockets
- 2 m (78.7 in) cable terminated within a molded six-pole circular connector
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 ohm < 1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	61 x 190 x 116 mm (2.4 x 7.5 x 4.6 in)
Flush mounted	6 x 190 x 120 mm (0.2 x 7.5 x 4.7 in)
Weight	800 g (1.76 lb)
Color top	Silver (RAL 9022)
Color base	
DCN-DISV-L	Light Grey (RAL 000 7500)
DCN-DISV-D	Charcoal (PH 10736)

Ordering information

DCN-DISV-L Discussion Voting Light
DCN Next Generation discussion unit with voting, pluggable microphone, light base. Microphone and rims to be ordered separately.
Order number **DCN-DISV-L**

DCN-DISV-D Discussion Voting Dark
DCN Next Generation discussion unit with voting, pluggable microphone, dark base. Microphone and rims to be ordered separately.
Order number **DCN-DISV-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DISVCS Discussion Unit with Voting and Channel Selection

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Pluggable microphone
- Five voting buttons
- Channel selector with number and abbreviated Channel name

The Discussion Unit with Voting and Channel Selector enables participants to speak, register a request-to-speak, listen to the speaker and vote. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The unit has five voting buttons for all types of voting. The yellow indicator rings around the voting buttons are used to prompt users to register their presence, to start voting and to confirm their vote. When the unit's attendance LED is yellow, it indicates the delegate is present.
The unit has a built-in channel selector, which makes it suitable for discussions in which more than one language is used and simultaneous interpretations are available. The channel selector includes up and down channel select keys and a display showing the number and the abbreviation of the languages, enabling rapid selection of the required language channel.

Functions

- Headphone output level reduction to prevent acoustic feedback. (active when listening to the floor and when the microphone is on)
- The built-in loudspeaker is muted when the microphone is on to prevent acoustic feedback
- A variety of rims (DCN-DISR, to be ordered separately) are available to allow matching to the interior,
- The unit can be used as a delegate unit, as a chairman unit (DCN-DISBCM chairman buttons to be ordered separately) or as a delegate unit with auxiliary button. The versatile auxiliary button can be used as an usher call, for example
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)
- The unit is available in light and dark colored bases

Controls and Indicators

- Five voting buttons with indicator rings around the buttons
- Unit activity / delegate presence indicator
- Alphanumeric display for language channel selection with number and abbreviated channel name
- Microphone button with a red, green or yellow illuminated ring. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'.
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Headphones volume control buttons
- Recessed 'De-init' switch

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) stereo jack type headphone sockets
- 2 m (78.7 in) cable terminated within a molded six-pole circular connector.
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 ohm < 1k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	61 x 190 x 116 mm (2.4 x 7.5 x 4.6 in)
Flush mounted	6 x 190 x 120 mm (0.2 x 7.5 x 4.7 in)
Weight	800 g (1.76 lb)
Color top	Silver (RAL 9022)
Color base	
DCN-DISVCS-L	Light Grey (RAL 000 7500)
DCN-DISVCS-D	Charcoal (PH 10736)

Ordering information

DCN-DISVCS-L Discussion Voting Channel Selector Light
DCN Next Generation discussion unit with voting, channel selector, pluggable microphone, light base. Microphone and rims to be ordered separately.
Order number **DCN-DISVCS-L**

DCN-DISVCS-D Discussion Voting Channel Selector Dark
DCN Next Generation discussion unit with voting, channel selector, pluggable microphone, dark base. Microphone and rims to be ordered separately.
Order number **DCN-DISVCS-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DISR Rims for Discussion Units

A rim completes the discussion units. A variety of rims with different finishes are available to allow matching with any interior.

Technical specifications

Mechanical

Mounting	Click and fit on any discussion unit
Color base	
DCN-DISRH-SR	Silver (RAL 9022) high gloss
DCN-DISR-SR	Silver (RAL 9022)
DCN-DISR-D	Charcoal (PH 10736)
DCN-DISRMH	High gloss metal
DCN-DISRMS	Semi gloss metal

Ordering information

DCN-DISRH-SR Rim High Gloss Silver (10 pcs)
DCN Next Generation discussion unit rim, high-gloss, silver (10 pieces).
Order number **DCN-DISRH-SR**

DCN-DISR-SR Rim Silver (10 pcs)
DCN Next Generation discussion unit rim, silver (10 pieces).
Order number **DCN-DISR-SR**

DCN-DISR-D Rim Dark (10 pcs)
DCN Next Generation discussion unit rim, dark (10 pieces).
Order number **DCN-DISR-D**

DCN-DISRMH Rim Metal High Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, high-gloss (10 pieces).
Order number **DCN-DISRMH**

DCN-DISRMS Rim Metal Semi Gloss (10 pcs)
DCN Next Generation discussion unit rim, metal, semi-gloss (10 pieces).
Order number **DCN-DISRMS**

DCN-MICS/L Pluggable Microphone Short/Long Stem

Features

- Uni-directional microphone on adjustable stem
- Built-in plop and windshield

The innovative, stylish and ergonomically designed microphone with an adjustable stem simply plugs directly into a Discussion unit, Concentus, flush-mounted Microphone Connection panels or Interpreter desk. It has a uni-directional response for optimum performance even in noisy conditions, and has low susceptibility to interference from mobile phones.

Functions

Controls and Indicators

- Red or green illuminator. Red indicates microphone is active, green indicates request-to-speak accepted

Interconnections

- Connector to plug and fasten the microphone

Technical specifications

Mechanical

Mounting	Plug and fasten into Discussion units, Concentus, flush mounted Microphone connection panels and Interpreter desks
Length	
DCN-MICS / DCN-MICS-D	310 mm (12.2 in)
DCN-MICL / DCN-MICL-D	480 mm (18.9 in)
Weight	
DCN-MICS / DCN-MICS-D	100 g (0.22 lb)
DCN-MICL / DCN-MICL-D	115 g (0.25 lb)
Color top	
DCN-MICS / DCN-MICL	Silver (RAL 9022)
DCN-MICS-D / DCN-MICL-D	Dark (graphite gray)

Ordering information

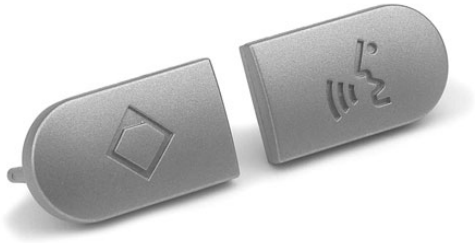
DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-DISBCM Buttons Chairman (10 sets)



DCN-DISBCM buttons for Chairman Discussion Units replace the single microphone button on a discussion unit when used in chairman mode. These buttons can also be used for the discussion unit in auxiliary control mode.

Technical specifications

Mechanical

Mounting	Click and fit on any Discussion unit
Color	Silver (RAL 9022)

Ordering information

DCN-DISBCM Buttons Chairman (10 sets)
DCN Next Generation discussion unit chairman buttons (10 sets).
Order number **DCN-DISBCM**

DCN-DISBDD Buttons Dual Use (10 sets)

DCN-DISBDD buttons for Dual Use Discussion Units replace the single microphone button on a discussion unit when used in dual delegate mode.

Technical specifications

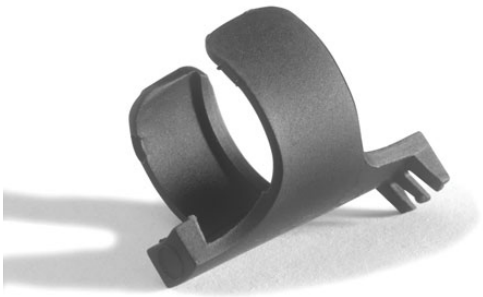
Mechanical

Mounting	Click and fit on any Discussion unit
Color	Silver (RAL 9022)

Ordering information

DCN-DISBDD Buttons Dual Use (10 sets)
DCN Next Generation discussion unit buttons for dual delegate use (10 sets).
Order number **DCN-DISBDD**

DCN-DISCLM Cable Clamp (25 pcs)



The cables can be secured to the DCN-CCU2 trunk outputs using the DCN-DISCLM cable clamp to prevent them from being pulled out accidentally.

Technical specifications

Mechanical

Mounting	Click and fit on any Discussion unit
Color	Charcoal (PH 10736)

Ordering information

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-FCDIS Flight Case for 10 Discussion Units

Features

- Rugged construction with reinforced corners
- Simplifies packing and unpacking
- Easy to carry and store

The DCN-FCDIS Flight Case for Discussion units accommodates 10 Discussion units with attached microphones.

Technical specifications

Mechanical

Dimensions (H x W x D)	430 x 665 x 255 mm (16.9 x 26.2 x 10 in)
Weight	9.3 kg (20.5 lb)
Color	grey

Ordering information

DCN-FCDIS Flight Case for 10 Discussion Units
DCN Next Generation flight case for 10 discussion units with microphones.
Order number **DCN-FCDIS**

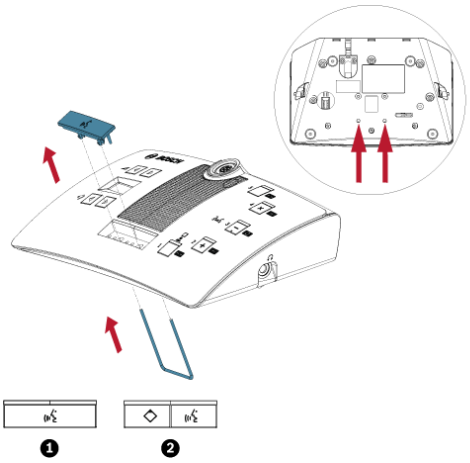
DCN-D Wired Delegate Units

DCN-D delegate units are typically used for smaller and medium sized conferences. The units are ideal when a flexible system configuration or portable conference facilities are required. All units are easily plugged into or removed from the system cabling, which enables the configuration to be set up quickly and efficiently.
Most units have a pluggable microphone (to be ordered separately) available in short and long stem length versions. The microphones have flexible stems for ease of use. The unit can be free-standing or fixed using mounting screws.
The units are connected in a simple daisy-chain configuration. Alternatively, they can be connected using a single cable and a trunk splitter to link the units to the system cabling, with connectors neatly hidden in the units themselves. This 'one cable' aspect of the DCN Conference Solutions system means there is no untidy mess of wires at the back of the units. It is especially advantageous for TV coverage, where the backs of the units are on show.
The DCN-D delegate units range from standard to delegate units with a channel selector and voting that enable contributing delegates to take part in the decision making process, a vital aspect of modern conferencing. The delegate units have 3 different operation modes. All delegate units can be used either for normal delegates or as a chairman unit. The third mode is auxiliary control. In this mode, the delegate has an extra button next to the microphone button, which can be used as an usher call, for example.

DCN-D delegate units overview

	Basic delegate	Chairman	Chaneel selector	Voting	Auxiliry
DCN-Dx-xx	•	•			
DCN-DCS-xx	•	•	•		
DCN-DV-xx	•	•		•	•
DCN-DVCS-xx	•	•	•	•	•

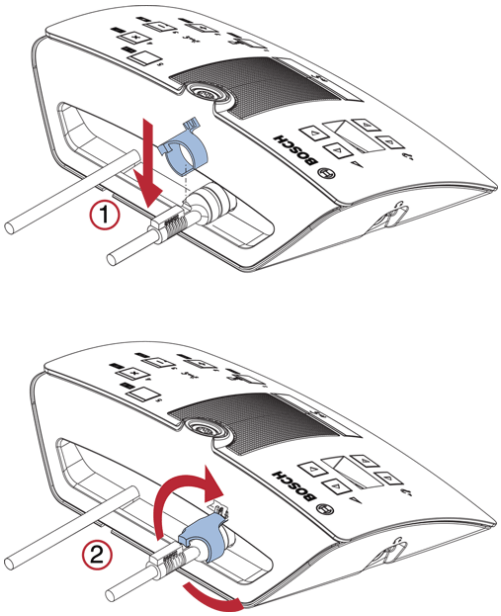
All DCN-D delegate units are delivered with a single delegate microphone button. For the chairman and auxiliary mode a different set of buttons is available: Auxilliary buttons and chairman buttons. The chairman buttons can also be used for auxiliary control. The buttons are easily removed using a special tool (supplied with the buttons). Sets of buttons to be ordered separately.



Replacing the button
Button types:
1. Single use button
2. Chairman or Auxiliary control button

DCN-D delegate units with long and short microphones
The delegate units with pluggable microphone are delivered without microphones. These microphones have to be ordered separately. Two different lengths and color of pluggable microphones are available.

To secure the loop trough cable of the delegate unit, cable clamps can be used (to be ordered separately).



Mounting the cable clamp

DCN-Dx-xx Delegate Unit Basic with fixed Microphone

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Fixed microphone
- Built-in loudspeaker
- Usable as delegate unit or chairman unit

The Delegate Unit with fixed microphone enables participants to speak, register a request-to-speak and listen to the speaker. The microphone stem is flexible. The unit also accommodates two headphone connections, so the speaker can be heard clearly even in situations with excessive background noise. The built-in loudspeaker is muted when the microphone is on to prevent acoustic feedback.

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when the microphone is on)
- The unit can be used a delegate unit or as a chairman unit (DCN-DBCM chairman buttons to be ordered separately)
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)
- The unit is available with two different microphone lengths

Controls and Indicators

- Microphone with red or green indicator
- Microphone button with a red, green or yellow illuminated LED. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Headphone volume control buttons
- Recessed 'De-init' switch

Interconnections

- Two 3.5 mm (0.14 in) stereo jack type headphone sockets
- 2 m (78.7 in) cable terminated within a molded six-pole circular connector
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 Ohm < 1k Ohm
Output power	2 x 15 mW/32 Ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting)
Dimensions (H x W x D)	**(without microphone)**
Tabletop	60 x 210 x 140 mm (2.36 x 8.27 x 5.51 in)
Microphone lengths	
DCN-DS-xx	312.3 mm (12.30 in)
DCN-DL-xx	477.4 mm (18.80 in)
Weight	
DCN-DS-xx	1.2 kg (2.65 lb)
DCN-DL-xx	1.2 kg (2.65 lb)
Color top	Black (RAL 9017)
Color rear	Silver (RAL 9006)

Ordering information

DCN-DS Delegate Unit Basic with fixed short Microphone
DCN Next Generation basic delegate unit with fixed short microphone.
Order number **DCN-DS**

DCN-DL Delegate Unit Basic with fixed long Microphone
DCN Next Generation basic delegate unit with fixed long microphone.
Order number **DCN-DL**

Accessories

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DCS-xx Delegate Unit with Channel Selector

2

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Channel selector with number and abbreviated channel name
- Built-in loudspeaker and pluggable microphone
- Usable as delegate or chairman unit

The Delegate Unit with Channel Selector enables participants to speak, register a request-to-speak and listen to the speaker. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The unit has a built-in channel selector that makes it suitable for discussions in which more than one language is used and simultaneous interpretations are available. The channel selector includes two up and down channel select keys and a display showing the number and the abbreviation of the languages, enabling rapid selection of the required language channel.

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when microphone is on)
- Socket for pluggable microphones (DCN-MICS or DCN-MICL)
- The built-in loudspeaker speaker is muted when the microphone is on to prevent acoustic feedback.
- The unit can be used a delegate unit or as a chairman unit (DCN-DBCM chairman buttons, to be ordered separately)
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)

Controls and Indicators

- Alphanumeric display for language channel selection with number and abbreviated channel name
- Microphone button with a red, green or yellow illuminated LED. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Headphones have volume control buttons
- Recessed 'De-init' switch

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) stereo jack type headphones sockets
- 2 m (78.7 in) cable terminated with in a molded six-pole circular connector.
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 Ohm < 1k Ohm
Output power	2 x 15 mW/32 Ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting)
Dimensions (H x W x D)	(without microphone)
Tabletop	60 x 210 x 140 mm (2.36 x 8.27 x 5.51 in)
Weight	1.15 kg (2.54 lb)
Color top	Black (RAL 9017)
Color rear	Silver (RAL 9006)

Ordering information

DCN-DCS Delegate Unit with Channel Selector
DCN Next Generation delegate unit with channel selector, pluggable microphone, dark. Microphone to be ordered separately.
Order number **DCN-DCS**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DV-xx Delegate Unit with Voting

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Five voting buttons
- Built-in loudspeaker and pluggable microphone
- Usable as a delegate unit or as a chairman unit

This Delegate Unit with Voting enables participants to speak, register a request-to-speak, listen to the speaker and vote. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The unit has five voting buttons for all types of voting. The yellow indicator rings around the voting buttons are used to prompt users to register their presence, to start voting and to confirm their votes. When the unit's attendance LED is yellow, it indicates the delegate is present.

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when the microphone is on)
- The unit accommodates two headphone connections, so the speaker can be heard clearly even in situations with excessive background noise
- The built-in loudspeaker is muted when the microphone is on to prevent acoustic feedback
- The unit can be used a delegate unit, as a chairman unit (DCN-DBCM chairman buttons to be ordered separately) or as a delegate unit with auxiliary button. The auxiliary button is a versatile function, which can be used as an usher call for example
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)
- The unit is available in a dark colored base

Controls and Indicators

- Five voting buttons with indicator rings around the buttons
- Unit activity/delegate presence indicator
- Microphone button with a red, green or yellow illuminated LED. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Headphone volume control buttons
- Recessed 'De-init' switch

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) stereo jack type headphone sockets
- 2 m (78.7 in) cable terminated within a molded six-pole circular connector
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 Ohm < 1k Ohm
Output power	2 x 15 mW/32 Ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting)
Dimensions (H x W x D)	**(without microphone)**
Tabletop	60 x 210 x 140 mm (2.36 x 8.27 x 5.51 in)
Weight	1.15 kg (2.54 lb)
Color top	Black (RAL 9017)
Color rear	Silver (RAL 9006)

Ordering information

DCN-DV Delegate Unit with Voting
DCN Next Generation delegate unit with voting selector, pluggable microphone, dark. Microphone to be ordered separately.
Order number **DCN-DV**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-DVCS-xx Delegate Unit with Voting and Channel Selector

2

Features

- Low susceptibility to mobile phone interference
- Compact, attractive and ergonomic design
- Five voting buttons, built-in loudspeaker and pluggable microphone
- Channel selector with number and abbreviated channel name
- Usable as a delegate unit or as a chairman unit

The Delegate Unit with Voting and Channel Selector enables participants to speak, register a request-to-speak, listen to the speaker and vote. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The unit has five voting buttons for all types of voting. The yellow indicators above the voting buttons are used to prompt users to register their presence, to start voting and to confirm their vote. When the unit's attendance LED is yellow, it indicates the delegate is present.
The unit has a built-in channel selector, which makes it suitable for discussions in which more than one language is used and simultaneous interpretations are available. The channel selector includes up and down channel select keys and a display showing the number and the abbreviation of the languages, enabling rapid selection of the required language channel.

Functions

- Headphone output level reduction to prevent acoustic feedback (active when listening to the floor and when the microphone is on).
- The built-in loudspeaker is muted when the microphone is on to prevent acoustic feedback
- The unit can be used as a delegate unit, as a chairman unit (DCN-DBCM chairman buttons to be ordered separately) or as a delegate unit with auxiliary button. The versatile auxiliary button can be used as an usher call, for example
- To lock the loop-through cable, a cable clamp is available (DCN-DISCLM, to be ordered separately)

Controls and Indicators

- Five voting buttons with indicator above the buttons
- Unit activity/delegate presence indicator
- Alphanumeric display for language channel selection with number and abbreviated channel name
- Microphone button with a red, green or yellow illuminated LED. Red indicates microphone is active, green indicates request-to-speak accepted, and yellow indicates 'VIP'.
- VIP indicator is lit when the delegate is part of the notebook (only available if PC Software is used)
- Headphones volume control buttons
- Recessed 'De-init' switch

Interconnections

- Socket for pluggable microphone
- Two 3.5 mm (0.14 in) stereo jack type headphone sockets
- 2 m (78.7 in) cable terminated within a molded six-pole circular connector
- Six-pole circular connector for loop-through connections

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	30 Hz to 20 kHz
Headphone load impedance	> 32 Ohm < 1k Ohm
Output power	2 x 15 mW/32 Ohm

Mechanical

Mounting	Tabletop (portable or fixed mounting)
Dimensions (H x W x D)	(without microphone)
Tabletop	60 x 210 x 140 mm (2.36 x 8.27 x 5.51 in)
Weight	1.15 kg (2.54 lb)
Color top	Black (RAL 9017)
Color rear	Silver (RAL 9006)

Ordering information

DCN-DVCS Delegate Unit with Voting, Channel Selector
DCN Next Generation delegate unit with channel selector, voting, pluggable microphone, dark. Microphone to be ordered separately.
Order number **DCN-DVCS**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-MICS/L Pluggable Microphone Short/Long Stem

Features

- Uni-directional microphone on adjustable stem
- Built-in plop and windshield

The innovative, stylish and ergonomically designed microphone with an adjustable stem simply plugs directly into a Discussion unit, Concentus, flush-mounted Microphone Connection panels or Interpreter desk. It has a uni-directional response for optimum performance even in noisy conditions, and has low susceptibility to interference from mobile phones.

Functions

Controls and Indicators

- Red or green illuminator. Red indicates microphone is active, green indicates request-to-speak accepted

Interconnections

- Connector to plug and fasten the microphone

Technical specifications

Mechanical

Mounting	Plug and fasten into Discussion units, Concentus, flush mounted Microphone connection panels and Interpreter desks
Length	
DCN-MICS / DCN-MICS-D	310 mm (12.2 in)
DCN-MICL / DCN-MICL-D	480 mm (18.9 in)
Weight	
DCN-MICS / DCN-MICS-D	100 g (0.22 lb)
DCN-MICL / DCN-MICL-D	115 g (0.25 lb)
Color top	
DCN-MICS / DCN-MICL	Silver (RAL 9022)
DCN-MICS-D / DCN-MICL-D	Dark (graphite gray)

Ordering information

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

Concentus Units

Tabletop Concentus units

Concentus units are typically used for larger conferences. The units are ideal when a flexible configuration or portable facilities are required. All units are easily plugged into or removed from the system cabling, which enables the conference system to be set up quickly and efficiently. The unit has a pluggable microphone (supplied separately) available in either short or long stem versions. The microphones have flexible stems for ease of use. The unit can be free-standing or fixed using mounting screws. The Concentus units can also be flush-mounted in more permanent installations. Storage and transport is simplified by rugged suitcases that accommodate complete systems.

The units can be connected in a simple daisy chain configuration. Alternatively, they can be connected using one thin cable and a trunk splitter to connect the unit to the system cabling, with connectors neatly hidden in the units. This ‘one cable’ aspect of the DCN Next Generation system means there is no untidy mess of wires at the back of the units. This ‘clean’ configuration is especially advantageous for TV coverage, where the backs of the units are on show.

The Concentus units range from standard Concentus units to Concentus with chip card reader, graphic LCD screen and channel selector, up to chairman units with a priority key and advanced options. All Concentus units provide voting facilities that enable contributing delegates to take part in the decision making process, a vital aspect of modern conferencing.

Concentus units overview

	Pluggable microphone	Channel Selector	Voting	Graphical LCD	ID-card reader	Chairman
DCN-CON	•		•			
DCN-CONCS	•	•	•			
DCN-CONFF	•	•	•	•	•	
DCN-CONCM	•	•	•	•	•	•

DCN-CON Concentus Basic

Features

- Low susceptibility to mobile phones
- Compact, attractive delegate unit
- Built-in fold-away flat-panel loudspeaker
- Five voting buttons
- Cable connections located underneath the unit

The DCN-CON is the standard delegate conference unit that enables delegates to speak, register a request-to-speak, register a response request, listen to the speaker and vote. It has low susceptibility to interference from mobile phones. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The flat-panel loudspeaker offers superior acoustics with minimal feedback, thus increasing intelligibility. It is automatically muted when the microphone is activated. When the unit is not being used, the loudspeaker panel conveniently folds down. There are five voting buttons for all kind of voting. An external contact is available to connect external fingerprint readers.

Functions

Controls and indicators

- Built-in, fold-away, flat-panel loudspeaker, automatically muted if the microphone is on
- Microphone 'on/off' or 'request-to-speak' button
- 'Microphone on' indicator at the top of the loudspeaker
- Tri-color indicator above the microphone button:
  - Red 'Microphone on' indicator
  - Green 'Request-to-speak' confirmation indicator
  - Yellow 'VIP' indicator. 'VIP' LED is lit when the delegate unit is part of the notebook, which is only available when PC control software is used
- Five voting buttons with yellow LED confirmation indicators These can be used to register:
  - PRESENT, YES (+), NO (-), ABSTAIN (X), (parliamentary voting)
  - Numerals: 1 to 5 (multiple choice or opinion polls)
  - Rating scale: - -, -, 0, +, ++ (audience response)

Connections

- Socket for pluggable microphone
- 2 m (78.7 in) cable terminated in a molded six-pole circular connector
- Six-pole circular connector for loop-through connections
- Eight-pole modular jack connector for Intercom Handset LBB 3555/00 and external present and Fraud contact e.g. a fingerprint reader

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	50 x 275 x 155 mm (2.0 x 10.8 x 6.1 in)
Flush mounted	30 x 275 x 155 mm (1.2 x 10.8 x 6.1 in)
Weight	1.4 kg (3.1 lb)
Color top	Charcoal (PH 10736) with silver (RAL 9022) panel
Color base	Charcoal (PH 10736)

Ordering information

DCN-CON Concentus Basic
DCN Next Generation concentus unit with voting, pluggable microphone. Microphone to be ordered separately.
Order number **DCN-CON**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-CONCS Concentus Channel Selector

Features

- Low susceptibility to mobile phones
- Compact, attractive delegate unit
- Built-in, fold-away, flat-panel loudspeaker
- Five voting buttons
- Cable connections located underneath the unit

The DCN-CONCS is similar to the DCN-CON Standard Delegate Unit, but includes a built-in language channel selector. This makes it suitable for conferences where more than one language is used and simultaneous interpretations are available. The channel selector includes up and down select keys and a 2-digit display with back-lighting, enabling rapid selection of the required language channel. Channel selection is automatically limited to the number of language channels available. The flat-panel loudspeaker offers superior acoustics with minimal feedback, thus increasing intelligibility. When the unit is not being used, the loudspeaker panel conveniently folds down.

Functions

Controls and Indicators

- Channel selector with channel number display with back lighting and channel select keys (up/down)
- Headphone volume control on each side of the unit
- Built-in fold-away flat-panel loudspeaker, automatically muted if a microphone is on
- Microphone 'on/off ' or 'request-to-speak' button
- 'Microphone-on' indicator at the top of the loudspeaker
- Tri-color indicator above the microphone button:
  - Red microphone on indicator
  - Green 'Request-to-speak' confirmation indicator
  - Yellow 'VIP' indicator. 'VIP' is lit when the delegate unit is part of the notebook, which is only available when PC control software is used
- Five voting buttons with yellow LED confirmation indicators These can be used to register:
  - PRESENT, YES (+), NO (-), ABSTAIN (X), (parliamentary voting)
  - Numerals: 1 to 5 (multiple choice or opinion polls)
  - Rating scale: - -, -, 0, +, ++ (audience response)

Interconnections

- Socket for pluggable microphone
- 2 m (78.7 in) cable terminated in a molded six-pole circular connector
- Socket for external microphone or headset microphone
- Six-pole circular connector for loop-through connections
- Eight-pole modular jack connector for Intercom Handset LBB 3555/00 and external present and fraud contact e.g. a fingerprint reader
- Left and right 3.5 mm (0.14 in) stereo jack type headphones sockets
- Connection 3.5 mm (0.14 in) for external microphone or stereo jack type headset microphone

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Headphone connection	
Frequency response	30 Hz to 20 kHz
Load impedance	> 32 ohm
Output power	2 x 15 mW/32 ohm
Headset connection	
Frequency response	30 Hz - 20 kHz
Load impedance	> 32 ohm
Output power	2 x 15 mW/32 ohm
Nominal microphone input level	7 mVrms
Overload microphone input level	> 124 mVrms
Interface data	
Recommended external microphone type (or headset microphone)	
Element	Electret-condenser
Polar pattern	Omni directional
Operating voltage	5 VDC
Sensitivity	62 dB at 1200 ohm (0 dB = 1 V/mbar at 1 kHz)

Frequency response	100 Hz to 14 kHz
Connector	3.5 mm (0.14 in) jack mono or stereo

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	50 x 275 x 155 mm 2.0 x 10.8 x 6.1 in)
Flush mounted	30 x 275 x 155 mm (1.2 x 10.8 x 6.1 in)
Weight	1.4 kg (3.1 lb)
Color top	Charcoal (PH 10736) with silver (RAL 9022) panel
Color base	Charcoal (PH 10736)

Ordering information

DCN-CONCS Concentus Channel Selector
DCN Next Generation concentus unit with voting, channel selector, pluggable microphone. Microphone to be ordered separately.
Order number **DCN-CONCS**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-CONFF Concentus Full Function

Features

- Low susceptibility to mobile phones
- Compact, attractive delegate unit
- Built-in fold-away flat-panel loudspeaker
- Five voting buttons
- Cable connections located underneath the unit

The top-of-the-range, multi-functional delegate unit meets the demands of even the largest conferences. It provides facilities for speaking, registering a request-to-speak, registering a request-to-respond, listening, voting, selecting language channels, chip card reading and displaying conference and user-related information. It has low susceptibility to interference from mobile phones. It is stylistically and functionally similar to the DCN-CONCS Delegate Unit with Channel Selector, but also includes a chip card reader and a graphic display with backlighting. When a chip card is inserted into the card reader, the graphic LCD screen automatically displays user-related information in the language assigned to the delegate chip card. The graphic LCD screen has permanent backlighting, and can display characters from complex European languages or icon-based-scripts such as Chinese. Channel selection is automatically limited to the number of language channels available. The flatpanel loudspeaker offers superior acoustics with minimal feedback, so increasing intelligibility. When the unit is not being used, the loudspeaker panel conveniently folds down.

Functions

Controls and Indicators

- Channel selector with channel number display with back lighting and channel select keys (up/down)
- Headphone volume control on each side of the unit
- Graphic LCD screen. Typical displays include:
  - button description
  - multi-lingual user instructions
  - information on the number of current speakers
  - request-to-speak information and confirmation
  - voting results
  - remaining/elapsed speech time
  - public and personal messages
  - additional user information
- Five button with LED indicators (for use in combination with the graphic LCD screen). The soft buttons can provide users with display information such as messages, conference- and microphone user-related information. Depending on the application software the five soft buttons can be used as voting buttons with confirmation indicators (yellow LEDs), enabling the user to register:
  - PRESENT, YES(+), NO (-), ABSTAIN (X), (parliamentary voting)
  - Numerals: 1 to 5 (multiple choice or opinion poll voting)
  - Rating scale: - -, - 0, +, ++ (audience response)
- Identification and access control by card reader with or without PIN
- Identification and access control by card reader with or without PIN
- Built-in fold-away flat-panel loudspeaker, automatically muted if a microphone is on
- Microphone ‘on/off ’ or ‘request-to-speak’ button
- ‘Microphone on’ indicator at the top of the loudspeaker
- Tri-color indicator above the microphone button:
  - Red microphone on indicator
  - Green ‘Request-to-speak’ confirmation indicator
  - Yellow ‘VIP’ indicator. ‘VIP’ is lit when the delegate unit is part of the notebook, which is only available when PC control software is used

Interconnections

- Socket for pluggable microphone
- 2 m (78.7 in) cable terminated in a molded six-pole circular connector
- Socket for external microphone or headset microphone
- Six-pole circular connector for loop-through connections
- Eight-pole modular jack connector for Intercom Handset LBB 3555/00 and external present and fraud contact e.g. a. fingerprint reader
- Left and right 3.5 mm (0.14 in) stereo jack type headphones sockets
- Connection 3.5 mm (0.14 in) for external microphone or stereo jack type headset microphone

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Headphone connection	
Frequency response	30 Hz to 20 kHz
Load impedance	> 32 ohm
Output power	2 x 15 mW/32 ohm

Headset connection	
Frequency response	30 Hz - 20 kHz
Load impedance	> 32 ohm
Output power	2 x 15 mW/32 ohm
Nominal microphone input level	7 mVrms
Overload microphone input level	> 124 mVrms
Interface data	
Recommended external microphone type (or headset microphone)	
Element	Electret-condenser
Polar pattern	Omni directional
Operating voltage	5 VDC
Sensitivity	62 dB at 1200 ohm (0 dB = 1 V/mbar at 1 kHz)
Frequency response	100 Hz to 14 kHz
Connector	3.5 mm (0.14 in) jack mono or stereo

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	**(without microphone)**
Tabletop	50 x 275 x 155 mm (2.0 x 10.8 x 6.1 in)
Flush mounted	30 x 275 x 155 mm (1.2 x 10.8 x 6.1 in)
Weight	1.4 kg (3.1 lb)
Color top	Charcoal (PH 10736) with silver (RAL 9022) panel
Color base	Charcoal (PH 10736)

Ordering information

DCN-CONFF Concentus Full Function
DCN Next Generation concentus unit with voting, channel selector, graphical display, card reader, pluggable microphone. Microphone to be ordered separately.
Order number **DCN-CONFF**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-CONCM Concentus Chairman

Features

- Low susceptibility to mobile phones
- Compact, attractive delegate unit
- Built-in, fold-away, flat-panel loudspeaker
- Five voting buttons
- Cable connections located underneath the unit

The stylish and ergonomically designed chairman unit has all the necessary facilities to enable the user to chair a conference. It has low susceptibility to interference from mobile phones Similar in appearance to the DCN-CONFF Delegate Unit, the DCN-CONCM Chairman Unit includes a microphone priority button. When pressed, the priority button causes all currently active delegate microphones to be temporarily or permanently switched off, allowing the chairman to take control of the meeting. The chairman unit can also be used to start, stop or suspend voting, cancel a request-to-speak, turn off all active microphones and recall messages for display. A graphic LCD screen with permanent backlighting can display characters from complex European languages or icon-based scripts such as Chinese. Channel selection is automatically limited to the number of language channels available. The flat-panel loudspeaker offers superior acoustics with minimal feedback, so increasing intelligibility. When the unit is not being used, the loudspeaker panel conveniently folds down.

Functions

Controls and Indicators

- Priority key which causes an optional chime tone to sound while temporarily or permanently muting all active delegate units. The chairman microphone remains active as long as the priority button is pressed.
- Channel selector with channel number display with back lighting and channel select keys (up/down)
- Headphone volume control on each side of the unit
- Graphic LCD screen. Typical displays include:
  - button description
  - multi-lingual user instructions
  - information on the number of current speakers
  - request-to-speak information and confirmation
  - voting results
  - remaining/elapsed speech time
  - public and personal messages
  - additional user information
- Five button with LED indicators (for use in combination with the graphic LCD screen). The soft buttons can provide users with display information such as messages, conference- and microphone user-related information. Depending on the application software the five soft buttons can be used as voting buttons with confirmation indicators (yellow LEDs), enabling the user to register:
  - PRESENT, YES(+), NO (-), ABSTAIN (X), (parliamentary voting)
  - Numerals: 1 to 5 (multiple choice or opinion poll voting)
  - Rating scale: - -, - 0, +, ++ (audience response)
- Identification and access control by card reader with or without PIN
- Built-in fold-away flat-panel loudspeaker, automatically muted if a microphone is on
- Microphone ‘on/off ’ or ‘request-to-speak’ button
- ‘Microphone on’ indicator at the top of the loudspeaker
- Tri-color indicator above the microphone button:
  - Red microphone on indicator
  - Green ‘Request-to-speak’ confirmation indicator
  - Yellow ‘VIP’ indicator. ‘VIP’ is lit when the delegate unit is part of the notebook, which is only available when PC control software is used

Interconnections

- Socket for pluggable microphone
- 2 m (78.7 in) cable terminated in a molded six-pole circular connector
- Socket for external microphone or headset microphone
- Six-pole circular connector for loop-through connections
- Eight-pole modular jack connector for Intercom Handset LBB 3555/00 and external present and fraud contact e.g., fingerprint reader
- Left and right 3.5 mm (0.14 in) stereo jack type headphones sockets
- Connection 3.5 mm (0.14 in) for external microphone or stereo jack type headset microphone

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Headphone connection	
Frequency response	30 Hz to 20 kHz
Load impedance	> 32 ohm
Output power	2 x 15 mW/32 ohm

Headset connection	
Frequency response	30 Hz - 20 kHz
Load impedance	> 32 ohm
Output power	2 x 15 mW/32 ohm
Nominal microphone input level	7 mVrms
Overload microphone input level	> 124 mVrms
Interface data	
Recommended external microphone type (or headset microphone)	
Element	Electret-condenser
Polar pattern	Omni directional
Operating voltage	5 VDC
Sensitivity	62 dB at 1200 ohm (0 dB = 1 V/mbar at 1 kHz)
Frequency response	100 Hz to 14 kHz
Connector	3.5 mm (0.14 in) jack mono or stereo

Mechanical

Mounting	Tabletop (portable or fixed mounting) and flush mounting
Dimensions (H x W x D)	(without microphone)
Tabletop	50 x 275 x 155 mm (2.0 x 10.8 x 6.1 in)
Flush mounted	30 x 275 x 155 mm (1.2 x 10.8 x 6.1 in)
Weight	1.4 kg (3.1 lb)
Color top	Charcoal (PH 10736) with silver (RAL 9022) panel
Color base	Charcoal (PH 10736)

Ordering information

DCN-CONCM Concentus Chairman
DCN Next Generation concentus chairman unit with voting, channel selector, graphical display, card reader, pluggable microphone. Microphone to be ordered separately.
Order number **DCN-CONCM**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICS/L Pluggable Microphone Short/Long Stem

Features

- Uni-directional microphone on adjustable stem
- Built-in plop and windshield

The innovative, stylish and ergonomically designed microphone with an adjustable stem simply plugs directly into a Discussion unit, Concentus, flush-mounted Microphone Connection panels or Interpreter desk. It has a uni-directional response for optimum performance even in noisy conditions, and has low susceptibility to interference from mobile phones.

Functions

Controls and Indicators

- Red or green illuminator. Red indicates microphone is active, green indicates request-to-speak accepted

Interconnections

- Connector to plug and fasten the microphone

Technical specifications

Mechanical

Mounting	Plug and fasten into Discussion units, Concentus, flush mounted Microphone connection panels and Interpreter desks
Length	
DCN-MICS / DCN-MICS-D	310 mm (12.2 in)
DCN-MICL / DCN-MICL-D	480 mm (18.9 in)
Weight	
DCN-MICS / DCN-MICS-D	100 g (0.22 lb)
DCN-MICL / DCN-MICL-D	115 g (0.25 lb)
Color top	
DCN-MICS / DCN-MICL	Silver (RAL 9022)
DCN-MICS-D / DCN-MICL-D	Dark (graphite gray)

Ordering information

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-FCCON Flight Case for 10 Concentus Units

Features

- Rugged construction with reinforced corners
- Simplifies packing and unpacking
- Easy to carry and store
- Shaped foam interior

The DCN-FCCON Flight Case accommodates 10 Concentus units. There is also a special cover compartment for housing 10 microphones (standard and long).

Technical specifications

Mechanical

Dimensions (H x W x D)	430 x 665 x 255 mm (16.9 x 26.2 x 10 in)
Weight	9.3 kg (20.5 lb)
Color	Dark grey

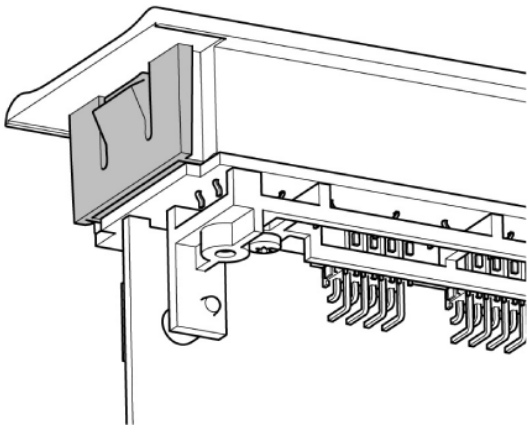
Ordering information

DCN-FCCON Flight Case for 10 Concentus Units
DCN Next Generation flight case for 10 concentus units with microphones.
Order number **DCN-FCCON**

Flush Mounted Units

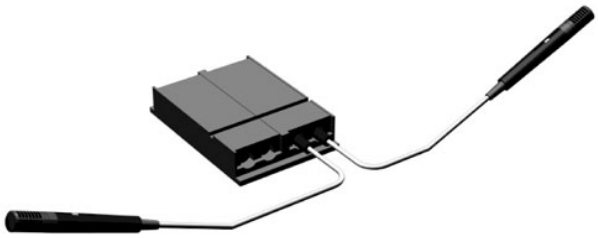
The broad range of DCN Next Generation flush mounted equipment is used for creating individual system contribution units for custom solutions. Flush mounted equipment is ideal for use in permanent installations where portability is not required. It can be installed into either tabletops or seat arm rests.
The DCN Next Generation flush-mount range won the prestigious iF product design award and it's available in high-style silver and dark charcoal finishes matching different decors.
All conference functions and facilities of tabletop contribution units are also available in flush mounted versions. Because of the modular set-up it offers great flexibility; depending on the required functionality, a selection of the different flush mounted units can be made.

Mounting
The units can be mounted in wood or metal. When mounting into a metal surface, the click-to-fit mechanism available on all flush-mounting units is used to secure the units into cut-outs on tabletops or the arm rests of seats.

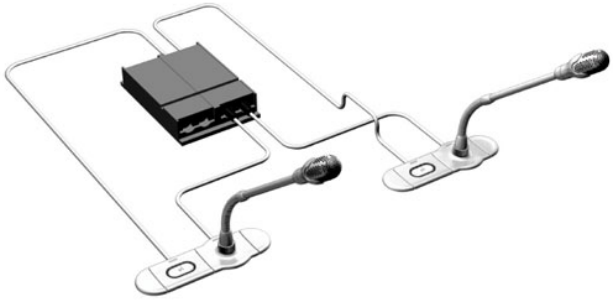


Click-to-fit mechanism
When mounting into a wooden surface the units are secured by using DCN-FCOUP Couplings. First the Couplings have to be placed into surface, and then the units are clicked into the Couplings. To place the DCN-FCOUP Couplings at the correct position, the DCN-FPT Flush Positioning Tool can be used.

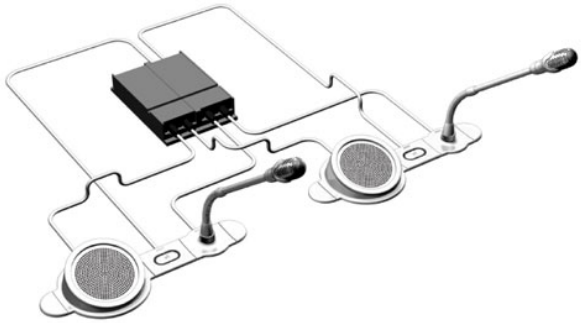
How to use the flush position tool
In the examples below, several flush mount configurations are shown. They range from a basic solution with only a hand microphone to a complete solution for chairman with voting and intercom.



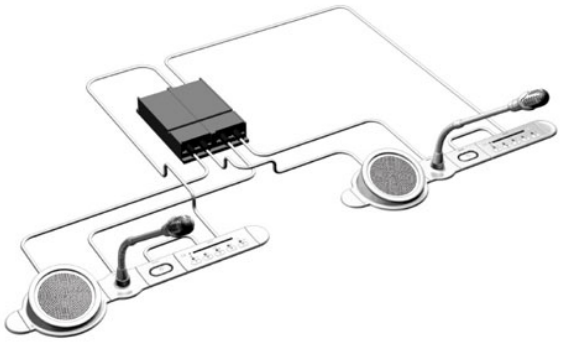
Configuration with basic microphone functionality



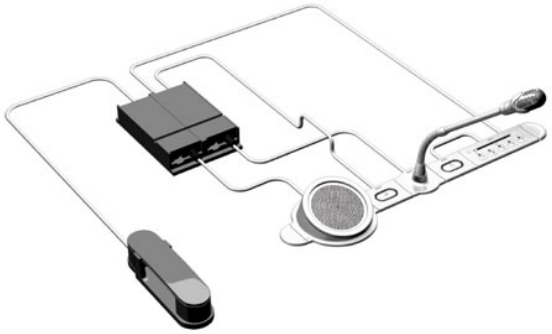
Flush mount configuration with dual microphones



Flush mount configuration with dual microphones and loudspeakers



Flush mount configuration with dual microphones, loudspeakers, voting and ID-card readers



Flush mount configuration with chairman priority control, microphones, loudspeaker, voting, ID-card reader and Intercom

DCN-DDI Dual Delegate Interface

Features

- Dual Delegate mode for two microphones and two voting and card panels
- Two microphone/line inputs
- Outputs to headphones or loudspeakers
- Range of mounting options
- Use for entrance/exit registration

The Dual Delegate Interface is intended for use in flush mounted custom solutions. It enables a number of functions to be added, making it suitable for chairmen and delegates. Such functions include facilities for connecting a Voting Panel, with or without a Card reader (DCN-FVCRD and DCN-FV). In addition, two separate audio inputs are provided that can also be used as line inputs. Each input can be assigned its own seat number, allowing the DCN-DDI to serve two delegate positions. Settings are available to assign the Dual Delegate Interface for use as a delegate unit, a dual delegate, chairman unit, entrance/exit unit or ambient microphone. The ambient microphone is located in the conference venue, and automatically switched on when no other delegate unit or chairman unit microphones are active. In this way, interpreters always have audio contact with conference venue.

Functions

- The loudspeaker output is switched off when the corresponding input is switched on
- The unit can be mounted free-standing on a tabletop, mounted on a wall, or discreetly mounted into tabletops or into the arm rests of chairs, etc.
- The unit is suitable for Hand-Held Microphones (DCN-FHH) or Pluggable Microphones (DCN-MICS, DCN-MICL) with Microphone Connection Panel (DCN-FMIC) and Microphone Control Panel (DCN-FMICB)
- The unit provides a single connection for an Intercom Handset (LBB 3555/00).

Controls and Indicators

- Three Switches per input with the following possibilities:
  - Microphone or line selection
  - Asymmetrical microphone input, symmetrical microphone/ line input, or symmetrical microphone input with phantom power selection
  - Input attenuation selection of 0, 6, 12 or 18 dB +/- 3 dB input level fine adjustment potentiometer per input Interconnection
- Remote control inputs (switches) and outputs (LEDs) matching the DCN microphones and control panels
- Switch to select the different modes of the DCN-DDI:
  - Dual delegate
  - Chairman
  - Dual delegate, one microphone
  - Dual delegate, muted loudspeakers
  - Single delegate
  - Entrance/Exit
  - Ambient microphone

Notice
To use the entrance/exit mode, PC control software is also required.

Interconnections

- Two RJ11 connectors for Microphone Control Panel DCN-FMIC, Priority Panel DCN-FPRIOB, Voting Panel DCN-FV, Voting and Card Panel DCN-FVCRD
- RJ11 connector for Intercom Handset LBB 3555/00
- Two balanced audio inputs for line (0 dB), or microphone (-60 dB) sources, with or without a phantom power supply (2 x eight-pole 262° DIN-type socket)
- Six-pole circular connector for loop-through system cabling
- 2 m (78.7 in) cable terminated with a molded six-pole circular connector
- Two 3.5 mm (0.14 in) stereo jack sockets for connection to headphones or to loudspeaker panel (DCN-FLSP).

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Mechanical

Mounting	On wall, under tabletop or seat, in arm rest or in cable duct
Dimensions (H x W x D) (excl. cables)	35 x 100 x 200 mm (1.4 x 3.9 x 7.9 in)
Weight	500 g (1.10 lb)
Color	Charcoal (PH 10736)

Ordering information

DCN-DDI Dual Delegate Interface
DCN Next Generation dual delegate interface for flush-mounted custom solutions.
Order number **DCN-DDI**

DCN-FHH Hand Held Microphone

Features

- Light, portable microphone
- Built-in plop and windshield
- On/off switch and LED status indicators

The DCN-FHH is a uni-directional, condenser microphone with built-in plop and windshield. It comfortably fits into one hand and is ideal for applications where the speaker is on the move. Two of these microphones can be connected to the Dual Delegate Interface DCN-DDI.

Functions

Controls and Indicators

- Condenser microphone with built-in plop and windshield
- Microphone on/off or request-to-speak button
- 'Microphone on' indicator (red LED)
- 'Request-to-speak' confirmation indicator (green LED)

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Mechanical

Mounting	Using clamp LBC 1215/01 the microphone may be mounted on a stand, wall or on a chair
Dimensions (H x W)	215 x 30 mm (8.5 x 1.2 in)
Cable length	
DCN-FHH	5 m (16.4 ft)
DCN-FHH-C	Coiled 0.4 m (1.3 ft), un-coiled 1.4 m (4.6 ft)
Weight	350 g (0.77 lb)
Color	Charcoal (PH 10736)

Ordering information

DCN-FHH Hand Held Microphone
DCN Next Generation hand-held microphone, cable length 5 m (16.4 ft).
Order number **DCN-FHH**

DCN-FHHC Hand Held Microphone
DCN Next Generation hand-held microphone with coiled cable, length uncoiled 1.4 m (4.6 ft).
Order number **DCN-FHHC**

DCN-FMIC Flush Microphone Connection Panel

Features

- Stylish and modern design (IF award)
- Channel selector output level control

The Microphone Connection Panel connects the pluggable microphone DCN-MICS and DCN-MICL to one of the audio inputs to the Dual Delegate Interface (DCN-DDI). The Microphone Connection Panel also has an output which controls the output level of the channel selector. This means that when the microphone is active, the output level of the channel selector is reduced to prevent acoustic feedback.

Functions

Interconnections

- 2 m (78.7 in) cable terminated with eight-pole 262° DIN-type plug
- Connector to control output level reduction of the channel selector (AMP173977-2 socket)

Technical specifications

Mechanical

Mounting	Click-to-fit in a metal panel with a thickness of 2 mm, or in combination with DCN-FCOUP couplings and DCN-FEC end caps in any surrounding
Dimensions (H x W x D)	40 x 50 x 50 mm (1.57 x 1.97 x 1.97 in)
Weight	10 g (0.02 lb)
Color	
DCN-FMIC	Silver (RAL 9022)
DCN-FMIC-D	Dark (graphite gray)

Ordering information

DCN-FMIC Flush Microphone Connection Panel
DCN Next Generation flush-mount microphone connection panel, silver. Microphone to be ordered separately.
Order number **DCN-FMIC**

DCN-FMIC-D Flush Microphone Connection Panel Dark
DCN Next Generation flush-mount microphone connection panel, dark. Microphone to be ordered separately.
Order number **DCN-FMIC-D**

Accessories

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-FMICB Flush Microphone Control Panel

Features

- Stylish and modern design (IF award)
- Microphone on/off button
- Colored status indicator ring

The Microphone Control Panel is connected to the Dual Delegate Interface (DCN-DDI) via one of the RJ11 control inputs.

Functions

Controls and Indicators

- One microphone control button
- Three-color illuminated ring around the microphone button which can show the following states:
  - Red - microphone is active
  - Flashing red* - last minute of speech time is active
  - Green - the delegate is listed in the request list
  - Flashing green - the delegate is the first in the request list and the next one to get the floor
  - Yellow* - the delegate is part of the Notebook and can control its microphone without interaction of the operator

* Only available with PC Control Software.

Interconnections

- 2 RJ11 connectors: one for connection to Dual Delegate Interface (DCN-DDI), and one for loop through

Technical specifications

Mechanical

Mounting	Click-to-fit in a metal panel with a thickness of 2 mm, or in combination with DCN-FCOUP couplings and DCN-FEC end caps in any surrounding
Dimensions (H x W x D)	40 x 50 x 50 mm (1.57 x 1.97 x 1.97 in)
Weight	200 g (0.44 lb)
Color	
DCN-FMICB	Silver (RAL 9022)
DCN-FMICB-D	Dark (graphite gray)

Ordering information

DCN-FMICB Flush Microphone Control Panel
DCN Next Generation flush-mount microphone control panel, silver.
Order number **DCN-FMICB**

DCN-FMICB-D Flush Microphone Control Panel Dark
DCN Next Generation flush-mount microphone control panel, dark.
Order number **DCN-FMICB-D**

DCN-MICS/L Pluggable Microphone Short/Long Stem

Features

- Uni-directional microphone on adjustable stem
- Built-in plop and windshield

The innovative, stylish and ergonomically designed microphone with an adjustable stem simply plugs directly into a Discussion unit, Concentus, flush-mounted Microphone Connection panels or Interpreter desk. It has a uni-directional response for optimum performance even in noisy conditions, and has low susceptibility to interference from mobile phones.

Functions

Controls and Indicators

- Red or green illuminator. Red indicates microphone is active, green indicates request-to-speak accepted

Interconnections

- Connector to plug and fasten the microphone

Technical specifications

Mechanical

Mounting	Plug and fasten into Discussion units, Concentus, flush mounted Microphone connection panels and Interpreter desks
Length	
DCN-MICS / DCN-MICS-D	310 mm (12.2 in)
DCN-MICL / DCN-MICL-D	480 mm (18.9 in)
Weight	
DCN-MICS / DCN-MICS-D	100 g (0.22 lb)
DCN-MICL / DCN-MICL-D	115 g (0.25 lb)
Color top	
DCN-MICS / DCN-MICL	Silver (RAL 9022)
DCN-MICS-D / DCN-MICL-D	Dark (graphite gray)

Ordering information

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-FPRIOB Flush Priority Panel

Features

- Stylish and modern design (IF award)
- Priority on/off button
- Red microphone on indicator

The Priority Panel is connected to the Dual Delegate Interface (DCN-DDI) to one of the RJ11 control inputs.

Functions

Controls and Indicators

- One microphone control button
- Red illuminated ring around the microphone button to indicate that priority is active

Interconnections

- 2 RJ11 connectors one for connection to DCN-DDI Dual Delegate Interface and one for loop through

Technical specifications

Mechanical

Mounting	Click-to-fit in a metal panel with a thickness of 2 mm, or in combination with DCN-FCOUP couplings and DCN-FEC end caps in any surrounding
Dimensions (H x W x D)	40 x 50 x 50 mm (1.57 x 1.97 x 1.97 in)
Weight	200 g (0.44 lb)
Color	
DCN-FPRIOB	Silver (RAL 9022)
DCN-FPRIOB-D	Dark (graphite gray)

Ordering information

DCN-FPRIOB Flush Priority Panel
DCN Next Generation flush-mount priority panel, silver.
Order number **DCN-FPRIOB**

DCN-FPRIOB-D Flush Priority Panel Dark
DCN Next Generation flush-mount priority panel, dark.
Order number **DCN-FPRIOB-D**

DCN-FLSP Flush Loudspeaker Panel

Features

- Stylish and modern design (IF award)
- Angled for better intelligibility

This loudspeaker panel is intended for use in combination with the Dual Delegate Interface (DCN-DDI). It consists of a loudspeaker behind a round grille.

Functions

Interconnections

- 2 m (78.7 in) cable terminated with a 3.5 mm (0.14 in) stereo jack

Technical specifications

Mechanical

Mounting	Click-to-fit in a metal panel with a thickness of 2 mm, or in combination with DCN-FCOUP couplings and DCN-FEC end caps in any surrounding
Dimensions (H x W x D)	40 x 100 x 100 mm (1.57 x 3.94 x 3.94 in)
Weight	203 g (0.45 lb)
Color	
DCN-FLSP	Silver (RAL 9022)
DCN-FLSP-D	Dark (graphite gray)

Ordering information

DCN-FLSP Flush Loudspeaker Panel
DCN Next Generation flush-mount loudspeaker panel, silver.
Order number **DCN-FLSP**

DCN-FLSP-D Flush Loudspeaker Panel Dark
DCN Next Generation flush-mount loudspeaker panel, dark.
Order number **DCN-FLSP-D**

2

DCN-FV Flush Voting Panel

Features

- Stylish and modern design (IF award)
- External 'Present' contact
- LED vote confirmation indicators
- LED unit active indicator

The Flush Voting Panel allows attendance registration and six types of voting: parliamentary, audience response, multiple choice, opinion poll, rating and for/against.
The Flush Voting Panel has an external present contact, which can be used for an external present or fraud switch. Fingerprint readers are typical for the external present contact use.
The Flush Voting Panel can be click-to-fit mounted in a metal panel with a thickness of 2 mm, or can be mounted in combination with DCN-FCOUP coupling pieces and DCN-FEC end caps in any surface. The Flush Voting Panel is connected to the Dual Delegate Interface (DCN-DDI).

Functions

Controls and Indicators
Front

- Five voting buttons with yellow confirmation indicators to prompt the user to indicate presence, to vote and to confirm registration of what is voted. The buttons and indicators work as follows:
  - Yes (+), no (-) and abstain (x) (used for attendance registration, parliamentary voting and for/against)
  - Numerals 1 to 5 (used for multiple choice, opinion polls and rating)
  - Rating scale: - -, -, 0, +, ++ (used for audience response)
- One blue LED unit active indicator to show that the system is in normal operation

Interconnections

- Two RJ11 connectors: one for connection to DCN-DDI Dual Delegate Interface, and one for loop through
- Connector for an external present contact (AMP173977-3 socket)

Technical specifications

Mechanical

Mounting	Click-to-fit in a metal panel with a thickness of 2 mm, or in combination with DCN-FCOUP couplings and DCN-FEC end caps in any surrounding
Dimensions (H x W x D)	40 x 100 x 40.68 mm (1.57 x 3.94 x 1.68 in)
Weight	81 g (0.18 lb)
Color	
DCN-FV	Silver (RAL 9022)
DCN-FV-D	Dark (graphite gray)

Ordering information

DCN-FV Flush Voting Panel
DCN Next Generation flush-mount voting panel, silver.
Order number **DCN-FV**

DCN-FV-D Flush Voting Panel Dark
DCN Next Generation flush-mount voting panel, dark.
Order number **DCN-FV-D**

DCN-FVCRD Flush Voting ID Card Panel

Features

- Stylish and modern design (IF award)
- Identification with ID card
- External Present contact
- LED vote confirmation indicators
- LED unit active indicator

The Flush Voting ID Card Panel has the same functionality as the Flush Voting Panel (DCN-FV) with the addition of an ID card reader.
The ID card reader enables identification of delegates to the DCN Next Generation system, as well as providing a convenient facility that ensures only authorized delegates can participate in voting sessions or general conference proceedings such as microphone use. The unit is connected to the Dual Delegate Interface DCN-DDI.

Functions

Controls and Indicators

Front

- Five voting buttons with yellow confirmation indicators to prompt the user to indicate presence, to vote and to confirm registration of what is voted. The buttons and indicators work as follows:
  - Yes (+), no (-) and abstain (x) (used for attendance registration, parliamentary voting and for/against)
  - Numerals 1 to 5 (used for multiple choice, opinion polls and rating)
  - Rating scale: - -, -, 0, +, ++ (used for audience response)
- One blue LED unit active indicator to show that the system is in normal operation. The yellow LED indicates the validity of the ID card

Interconnections

- 2 RJ11 connectors, one for connection to DCN-DDI Dual Delegate Interface and one for loop through
- Connector for an external present contact (AMP173977-3 socket)

Technical specifications

Mechanical

Mounting	Click-to-fit in a metal panel with a thickness of 2 mm, or in combination with DCN-FCOUP couplings and DCN-FEC end caps in any surrounding
Dimensions (H x W x D)	40 x 100 x 73.53 mm (1.57 x 3.94 x 2.89 in)
Weight	104 g (0.23 lb)
Color	
DCN-FVCRD	Silver (RAL 9022)
DCN-FVCRD-D	Dark (graphite gray)

Ordering information

DCN-FVCRD Flush Voting ID Card Panel
DCN Next Generation flush-mount voting panel with ID card, silver.
Order number **DCN-FVCRD**

DCN-FVCRD-D Flush Voting ID Card Panel Dark
DCN Next Generation flush-mount voting panel with ID card, dark.
Order number **DCN-FVCRD-D**

Accessories

DCN-IDCRD ID Card (100 pcs)
DCN Next Generation ID card, standard credit-card format (set of 100 pieces).
Order number **DCN-IDCRD**

DCN-FVU Flush Voting Unit

Features

- Stylish and modern design (IF award)
- Allows parliamentary voting, numerals and rating scale
- Easily mountable
- Direct loop through connection to the DCN network
- Economic solution for positions which only require voting facilities

The Flush Voting Unit allows attendance registration and six types of voting: parliamentary, audience response, multiple choice, opinion poll, rating and for/against.
The yellow LED confirmation indicators prompt the user to indicate presence and to vote and to confirm registration of what is voted.
The blue LED unit active indicator shows that the system is in normal operation. The blue LED flashes when the unit detects a communication fault.
The combination of the voting unit with the end caps forms a very stylish design, which fits in both modern and traditional meeting rooms.
The direct connection to the DCN network cable results into an economic solution for positions which only require voting facilities

Functions

Controls and Indicators
Front
- Five voting buttons with yellow confirmation indicators to prompt the user to indicate presence, to vote and to confirm registration of what is voted. The buttons and indicators work as follows:
  - Yes (+), no (-) and abstain (x) (used for attendance registration, parliamentary voting and for/against)
  - Numerals 1 to 5 (used for multiple choice, opinion polls and rating)
  - Rating scale: - -, -, 0, +, ++ (used for audience response)
- One unit active indicator. A constant lit blue LED indicates that the system is in normal operation. The blue LED flashes when the unit detects a communication fault

Back
- One de-init/init button

Interconnections
- 1 m (39.4 in) DCN cable terminated with a molded six-pole male circular connector
- 1 m (39.4 in) DCN cable terminated with a molded six-pole female circular connector for loop-through connection to the DCN network

Notice
An unused output cable must be terminated with an LBB 4118/00 Termination Plug.

Technical specifications

Mechanical

Mounting	Click-to-fit in a metal panel with a thickness of 2 mm, or in combination with DCN-FCOUP couplings and DCN-FEC end caps in any surrounding
Dimensions (H x W x D)	40 x 100 x 79.42 mm (1.57 x 3.94 x 3.12 in)
Weight	250 g (0.55 lb)
Color	
DCN-FVU	Silver (RAL 9022)
DCN-FVU-D	Dark (graphite gray)

Ordering information

DCN-FVU Flush Voting Unit
DCN Next Generation flush-mount voting unit with direct loop-through connection to DCN network, silver.
Order number **DCN-FVU**

DCN-FVU-D Flush Voting Unit Dark
DCN Next Generation flush-mount voting unit with direct loop-through connection to DCN network, dark.
Order number **DCN-FVU-D**

Accessories

LBB 4118/00 DCN Termination Plug
DCN Next Generation termination plug to be used with opened-ended DCN cabling.
Order number **LBB4118/00**

DCN-FCS Flush Channel Selector

Features

- Stylish and modern design (IF award)
- Automatically adapts to available channels
- Built-in “Silent” function
- No audio output until the headphone is connected
- Flush mountable in tabletops, on top or at the front, or in arm rests of seats

The Flush Channel Selector is a compact and stylish single-user audio channel selector for listening by headphone. It provides a choice of up to 32 high-quality audio channels used for distribution of interpretation and floor channels.

Functions

- Built-in “Silent” function; no audio output until one of the keys has been pressed to eliminate audible noise from the headphones when not in use
- Upon insertion of a headphone the default “floor” channel (channel 0) is selected with a comfortable headphone volume and the dimmed backlighting is activated

Controls and Indicators

- Two push-buttons (up/down) for channel selection
- Two push-buttons (up/down) for headphone volume control
- Backlit 2-digit LCD for channel number indication Interconnection

Interconnections

- 3.5 mm (0.14 in) stereo jack headphone connector
- Connector for external headphone
- 2 m (78.7 in) cable with a molded six-pole circular connector

Six-pole circular connector for loop-through interconnection

Technical specifications

Electrical

Frequency response	30 Hz - 20 kHz
Headphone Load impedance	> 32 ohm < 1 k ohm
Output power	2 x 15 mW/32 ohm

Mechanical

Mounting	Flush mounted
Dimensions (H x W x D)	40 x 100 x 78.67 mm (1.6 x 3.9 x 3.1 in)
Weight	0.3 kg (0.66 lb)
Color	
DCN-FCS	Silver (RAL 9022)
DCN-FCS-D	Dark (graphite gray)

Ordering information

DCN-FCS Flush Channel Selector
DCN Next Generation flush-mount channel selector, silver.
Order number **DCN-FCS**

DCN-FCS-D Flush Channel Selector Dark
DCN Next Generation flush-mount channel selector, dark.
Order number **DCN-FCS-D**

Accessories

LBB 3443/00 Lightweight Headphones
Lightweight headphones for high-quality sound reproduction, replaceable ear pads and normal cable.
Order number **LBB3443/00**

LBB 3443/10 Lightweight Headphones Durable Cable
Lightweight headphones for high-quality sound reproduction, replaceable ear pads and durable cable.
Order number **LBB3443/10**

LBB 3441/10 Under the Chin Headphones
Under the chin headphones with 1.2 m (4 ft) cable, terminated with 3.5 mm (0.14 in) right-angled gold-plated stereo jack plug.
Order number **LBB3441/10**

LBB 3442/00 Single Earphone
Lightweight single earphone, 1.2 m (3.94 ft) cable, terminated with 3.5 mm (0.14 in) right-angled mono gold-plated jack plug.
Order number **LBB3442/00**

LBB 3015/04 High Quality Dynamic Headphones
High quality dynamic headphone.
Order number **LBB3015/04**

DCN-TTH Table Top Housing (10 pcs)
DCN Next Generation table top housing to hold flush-mount units, charcoal (set of 10 pieces).
Order number **DCN-TTH**

DCN-FBP and DCN-FBPS Blank Panel

Features

- Stylish and modern design (IF award)
- 50 mm or 100 mm wide

The blank panel neatly closes off a slot in a flush mounted unit that is not in use. The panel can be removed if a future expansion requires the available slot. Two different panel widths are available: 100 mm (DCN-FBP) and 50 mm (DCN-FBPS).

Technical specifications

Mechanical

Mounting	Click-to-fit in a metal panel with a thickness of 2 mm, or in combination with DCN-FCOUP couplings, DCN-FEC end caps, in any surrounding
Dimensions (H x W)	
DCN-FBP(-D)	40 x 100 mm (1.57 x 3.94 in)
DCN-FBPS(-D)	40 x 50 mm (1.57 x 1.97 in)
Weight	
DCN-FBP(-D)	17 g (0.04 lb)
DCN-FBPS(-D)	9 g (0.02 lb)
Color	
DCN-FBP, DCN-FBPS	Silver (RAL 9022)
DCN-FBP-D DCN-FBPS-D	Dark (graphite gray)

Ordering information

DCN-FBP Flush Blank Panel Long (10 pcs)
DCNNG flush-mount blank panel long, 100 mm wide, flush-mounted, silver (set of 10 pieces).
Order number **DCN-FBP**

DCN-FBP-D Flush Blank Panel Long Dark (10 pcs)
DCNNG flush-mount blank panel long, 100 mm wide, flush-mounted, dark (set of 10 pieces).
Order number **DCN-FBP-D**

DCN-FBPS Flush Blank Panel Short (10 pcs)
DCNNG flush-mount blank panel short, 50 mm wide, flush-mounted, silver (set of 10 pieces).
Order number **DCN-FBPS**

DCN-FBPS-D Flush Blank Panel Short Dark (10 pcs)
DCNNG flush-mount blank panel short, 50 mm wide, flush-mounted, dark (set of 10 pieces).
Order number **DCN-FBPS-D**

DCN-FEC Flush End Cap (50 pcs)

Features

- Stylish and modern design (IF award)

Matching end caps give a finishing touch to the flush mounted devices. Two end caps are needed per flush mount position.

Technical specifications

Mechanical

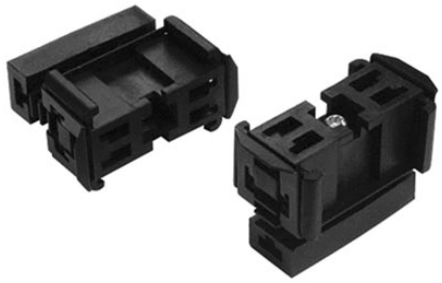
Mounting	Click-to-fit in DCN-FCOUP couplings
Dimensions (H x W)	40 x 20 mm (1.57 x 0.79 in)
Weight	2 g (0.004 lb)
Color	
DCN-FEC	Silver (RAL 9022)
DCN-FEC-D	Dark (graphite gray)

Ordering information

DCN-FEC Flush End Cap (50 pcs)
DCN Next Generation flush-mount end cap, silver (set of 50 pieces).
Order number **DCN-FEC**

DCN-FEC-D Flush End Cap (50 pcs)
DCN Next Generation flush-mount end cap, dark (set of 50 pieces).
Order number **DCN-FEC-D**

DCN-FCOUP Flush Coupling (50 pcs)



The couplings are used to connect flush mount panels and end caps.

Technical specifications

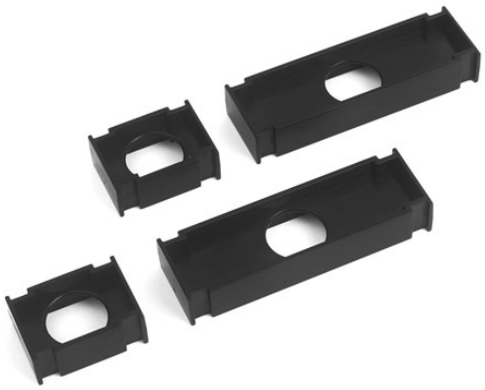
Mechanical

Mounting	Screw in to cutout in tabletop
Weight	12 g (0.027 lb)
Color	Black

Ordering information

DCN-FCOUP Flush Coupling (50 pcs)
DCN Next Generation flush-mount couplings for flush-mounted units (set of 50 pieces).
Order number **DCN-FCOUP**

DCN-FPT Flush Positioning Tools (2 sets)



This tool enables the flush mount elements to be easily positioned.

Technical specifications

Mechanical

Weight	31 g (0.068 lb)
Color	Charcoal (PH 10736)

Ordering information

DCN-FPT Flush Positioning Tools (2 sets)
DCN Next Generation flush-mount positioning tools for flush-mounted couplings (2 sets).
Order number **DCN-FPT**

DCN-TTH Table Top Housing (10 pcs)

This housing enables the flush mounted panels to be used in tabletop applications. The panel simply clicks into place in the housing. It is used with the DCN-FVU voting unit, but it can also be used for other flush mounted units such as the DCN-FCS Channel selector for 32 channels.
For permanent applications, the housing can be fixed to the tabletop.

Technical specifications

Mechanical

Mounting	Free-standing or fixed to the tabletop
Dimensions (H x W x D)	80 x 120 x 105 mm (3.15 x 4.72 x 4.13 in)
Weight	243 g (0.54 lb)
Color	Charcoal (PH 10736)

Ordering information

DCN-TTH Table Top Housing (10 pcs)
DCN Next Generation table top housing to hold flush-mount units, charcoal (set of 10 pieces).
Order number **DCN-TTH**

DCN-FET Flush Extraction Tools

Features

- Easy panel extraction without damaging and scratching
- Panel extraction from top or bottom

DCN-FET flush extraction tools are used to easily extract flush mounted panels.

Parts included

Quantity	Components
1	Tool for top extracting 50 or 100 mm (1.97 or 3.94 in) panels
1	Tool for top extracting DCN-MIC panel
1	Tool for top extracting DCN-FLSP panel
1	Set of spare blocks
1	Tool for bottom extracting 50 mm (1.97 in) panels
1	Tool for bottom extracting 100 mm (3.94 in) panels

Technical specifications

Mechanical

Color	Black
Material	ABS/Metal

Ordering information

DCN-FET Flush Extraction Tools
DCN Next Generation flush-mount extraction tools to extract flush-mounted panels.
Order number **DCN-FET**

2

DCN-IDESK Interpreter Desk

Features

- Low susceptibility to mobile phone interference
- Ergonomic design with features for visually impaired
- Up to 31 interpretation channels and the original floor language with an audio bandwidth of 20 kHz
- A graphic LCD with backlighting for bright information display in dark conditions
- 5 pre-select keys for relay languages with activation indication at the display

The DCN-IDESK is a single-user interpreter desk with a stylish and modern design. It fully conforms to internationally agreed standards. Clear positioning per functional area of the desk controls allows intuitive operation without mistakes.
A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately).

Functions

- A maximum of six desks can be installed per booth
- Tabletop and flush mountable
- Pluggable microphone (DCN-MICS)
- Ergonomic design

Controls and Indicators

- A and B output channel with status and selection indication at the display
- All channels have channel number, language names and quality level indicated at the display
- Features for visually impaired such as a small bump on the middle button, and beeps to indicate microphone on/off and double relay selected
- Built-in loudspeaker with language channel selector
- Speech timer to indicate elapsed time of interpretation
- Speak slowly facility to alert the current speaker to slow down
- Help request to an operator or usher
- Booth telephone and intercom indicator
- Automatic headset selection when headset connected
- Easy programming via menus on the display after entering the programming mode
- Microphone key with surrounding red “on-air” indicator and green for “booth not in use”
- Mute key
- Help key
- Slow (speak slowly) key
- Operator and chairman intercom call keys
- Message key with yellow LED indicator
- Telephone and Intercom call yellow LED indicators
- A and B channel engaged yellow LED indicators
- Rotary step control for channel settings (and other functions).
  Pressing this button sets the selection to the first available channel
- LCD with backlighting showing selected and activated output channel with channel numbers and abbreviated language names
- Loudspeaker rotary volume control
- Headphone rotary volume control
- Headphone rotary bass and treble tone controls
- Beep on/off key
- Five Relay language pre-select keys
- Floor/auto-relay key with green LED indicators
- Rotary step control (same as for speaking section) to select the relay languages for the relay pre-select keys and the loudspeaker channel. Pressing this button sets the selection to the first available channel
- LCD with backlighting, showing selected relay language with channel numbers, abbreviated names and quality indicators. Also the selected loudspeaker channel with abbreviated name is shown

Interconnections

- Socket for pluggable microphone
- Headphone or headset connector (five-pole 180° Din type socket wired according to IEC 574-3)
- 6.3 mm (0.25 in) and 3.5 mm (0.14 in) stereo jack headphone connectors
- 2 m (78.7 in) DCN cable with molded six-pole circular connector
- Six-pole circular socket for loop-through connection to the DCN network
- Eight-pole modular jack connector for connection to booth telephone, intercom and booth on-air sign

Technical specifications

Electrical

Headphone connection	
Frequency response	30 Hz - 20 kHz
Load impedance	> 32 ohm
Output power	2 x 30 mW/32 ohm
Headset connection	
Frequency response	30 Hz - 20 kHz
Load impedance	> 32 ohm
Output power	60 mW/32 ohm

Nominal microphone input level	7 mVrms
Overload microphone input level	> 124 mVrms

Mechanical

Mounting	Free-standing or mounted on a table
Dimensions (H x W x D) (with microphone)	82 x 330 x 170 mm (3.2 x 13 x 6.7 in)
Slope	25 degrees
Weight	1.3 kg (2.87 lb)
Color top	Silver (RAL 9022)
Color base	
DCN-IDESK-L	Light grey (RAL 000 7500)
DCN-IDESK-D	Charcoal (PH 10736)

Ordering information

DCN-IDESK-L Interpreter Desk Light
DCN Next Generation interpreter desk with light base. Microphone to be ordered separately.
Order number **DCN-IDESK-L**

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-IDESK-D Interpreter Desk Dark
DCN Next Generation interpreter desk with dark base. Microphone to be ordered separately.
Order number **DCN-IDESK-D**

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICS/L Pluggable Microphone Short/Long Stem

Features

- Uni-directional microphone on adjustable stem
- Built-in plop and windshield

The innovative, stylish and ergonomically designed microphone with an adjustable stem simply plugs directly into a Discussion unit, Concentus, flush-mounted Microphone Connection panels or Interpreter desk. It has a uni-directional response for optimum performance even in noisy conditions, and has low susceptibility to interference from mobile phones.

Functions

Controls and Indicators

- Red or green illuminator. Red indicates microphone is active, green indicates request-to-speak accepted

Interconnections

- Connector to plug and fasten the microphone

Technical specifications

Mechanical

Mounting	Plug and fasten into Discussion units, Concentus, flush mounted Microphone connection panels and Interpreter desks
Length	
DCN-MICS / DCN-MICS-D	310 mm (12.2 in)
DCN-MICL / DCN-MICL-D	480 mm (18.9 in)
Weight	
DCN-MICS / DCN-MICS-D	100 g (0.22 lb)
DCN-MICL / DCN-MICL-D	115 g (0.25 lb)
Color top	
DCN-MICS / DCN-MICL	Silver (RAL 9022)
DCN-MICS-D / DCN-MICL-D	Dark (graphite gray)

Ordering information

DCN-MICS Pluggable Short Microphone
DCN Next Generation pluggable short microphone, length 310 mm (12.2 in), silver.
Order number **DCN-MICS**

DCN-MICS-D Pluggable Short Microphone Dark
DCN Next Generation pluggable short microphone, length 310 mm (12.2 inch), dark.
Order number **DCN-MICS-D**

DCN-MICL Pluggable Long Microphone
DCN Next Generation pluggable long microphone, length 480 mm (18.9 in), silver.
Order number **DCN-MICL**

DCN-MICL-D Pluggable Long Microphone Dark
DCN Next Generation pluggable long microphone, length 480 mm (18.9 inch), dark.
Order number **DCN-MICL-D**

DCN-FCIDSK Flight Case for 2 Interpreter Desks

Features

- Rugged construction with reinforced corners
- Simplifies packing and unpacking
- Easy to carry and store

The DCN-FCIDSK Flight Case for the DCN-IDESK Interpreter Desk accommodates 2 desks, 2 DCN-MICS microphones and accessories such as headsets, headphones and tabletop reading-lights.

Technical specifications

Mechanical

Dimensions (H x W x D)	235 x 530 x 385 mm (9.3 x 20.9 x 15.2 in)
Weight	6 kg (13 lb)
Color	Light grey

Ordering information

DCN-FCIDSK Flight Case for 2 Interpreter Desks
DCN Next Generation flight case for 2 interpreter desks with microphones and accessories.
Order number **DCN-FCIDSK**

2

HDP-LWN Lightweight Neckband Headphone

Features

- Comfortable neckband stereo headphone
- Lightweight with high quality sound reproduction
- Replaceable ear pads
- Right-angled stereo gold-plated jack plug

Functions

Interconnections

- 1.3 m (4.25 ft) cable terminated with gold-plated 3.5 mm (0.14 in) right-angled stereo gold-plated jack plug

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	32 ohm per earpiece
Audio frequency response	20 Hz to 20 kHz (± 3 dB)
Power handling capacity	30 mW
Sensitivity (1 kHz)	111 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	56 g (0.12 lb)
Finish	Charcoal (PH 10736) with silver

Ordering information

HDP-LWN Lightweight Neckband Headphone
Lightweight neckband headphones for high-quality sound reproduction, replaceable ear pads.
Order number **HDP-LWN**

Accessories

HDP-LWNEP Earpads for neckband headphone (50 pairs)
Replacement ear pads for neckband headphones, 50 pairs.
Order number **HDP-LWNEP**

LBB 3443 Lightweight Headphones

Features

- Lightweight with high quality sound reproduction
- Replaceable ear pads
- Available with normal or durable cable
- Separate available solid washable ear pads
- Right-angled gold-plated jack plug

Functions

These headphones can be fitted with an optional set of washable ear pads.

Washable ear pads

Interconnections

- 1.3 m (4.25 ft) cable terminated with gold-plated 3.5 mm (0.14 in) angled stereo jack plug

Technical specifications

Electrical

Impedance	32 ohm per earpiece
Audio frequency response	50 Hz to 20 kHz (-10 dB)
Power handling capacity	50 mW
Sensitivity (1 kHz)	98 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	70 g (0.16 lb)
Finish	Charcoal (PH 10736) with silver

Ordering information

LBB 3443/00 Lightweight Headphones
Lightweight headphones for high-quality sound reproduction, replaceable ear pads and normal cable.
Order number **LBB3443/00**

LBB 3443/10 Lightweight Headphones Durable Cable
Lightweight headphones for high-quality sound reproduction, replaceable ear pads and durable cable.
Order number **LBB3443/10**

Accessories

LBB 3443/50 Foam Ear Pads for LBB 3443 (50 pairs)
Replacement foam ear pads for LBB 3443 (50 pairs).
Order number **LBB3443/50**

HDP-LWSP Solid Ear Pads for LBB 3443 (50 pairs)
Replacement, washable solid ear pads for LBB 3443 (50 pairs).
Order number **HDP-LWSP**

LBB 3442/00 Single Earphone

Features

- Lightweight single earphone
- Left or right ear use
- Right-angled gold-plated jack plug

Functions

Interconnections

- 1.2 m (3.94 ft) cable terminated with 3.5 mm (0.14 in) jack plug

Technical specifications

Electrical

Impedance	32 ohm
Audio frequency response	100 Hz to 5 kHz (-10 dB)
Power handling capacity	5 mW
Sensitivity (1 kHz)	114 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	25 g (0.06 lb)
Color	Dark grey

Ordering information

LBB 3442/00 Single Earphone
Lightweight single earphone, 1.2 m (3.94 ft) cable, terminated with 3.5 mm (0.14 in) right-angled mono gold-plated jack plug.
Order number **LBB3442/00**

LBB 3441/10 Under the Chin Headphones

Features

- Lightweight stereo headphones
- Ergonomic design for use under the chin
- Replaceable ear tips
- Right-angled, gold-plated stereo jack plug

Functions

Interconnections

- 1.2 m (4 ft) cable terminated with 3.5 mm (0.14 in) right-angled gold-plated stereo jack plug.

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	150 ohm per earpiece
Audio frequency response	50 Hz to 5 kHz (-10 dB)
Power handling capacity	60 mW
Sensitivity (1 kHz)	107 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	33 g (0.07 lb)
Color	Black

Ordering information

LBB 3441/10 Under the Chin Headphones
Under the chin headphones with 1.2 m (4 ft) cable, terminated with 3.5 mm (0.14 in) right-angled gold-plated stereo jack plug.
Order number **LBB3441/10**

Accessories

LBB 3441/50 Ear Tips for LBB 3441 (500 pairs)
Replacement ear tips for LBB 3441 (500 pairs).
Order number **LBB3441/50**

HDP-ILN Induction Loop Neckband

Features

- Lightweight
- Used with ‘T-coil’ hearing aids
- Gold-plated jack plug

Functions

This induction loop neckband can be used with:
- Integrus receivers
- CCS900 unit
- DCN unit

The neckband magnetically couples the sound signal from the headphone output to a ‘T-coil’ hearing aid.

Interconnections
- 0.9 m (3ft) cable terminated with a 3.5 mm (0.14 in) gold-plated jack plug.

Technical specifications

Mechanical

Weight	45 g (0.10 lb)
Color	Charcoal with silver

Ordering information

HDP-ILN Induction Loop Neckband
Induction loop neckband, lightweight.
Order number **HDP-ILN**

LBB 3015/04 High Quality Dynamic Headphones

Features

- Durable, dynamic headphones
- Replaceable ear pads
- High-quality sound reproduction
- Gold-plated stereo jack plug

Functions

Interconnections

- 1.5 m (5 ft) cable terminated with a 3.5 mm (0.14 in) stereo jack plug

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	720 ohm per earpiece
Audio frequency response	250 Hz to 13 kHz (-10 dB)
Power handling capacity	200 mW
Sensitivity (1 kHz)	
97 dB SPL/earpiece at 0 dBV/system	
96 dB SPL/earpiece at 1 mW/earpiece	

Mechanical

Weight	110 g (0.24 lb)
Color	Dark grey

Ordering information

LBB 3015/04 High Quality Dynamic Headphones
High quality dynamic headphone.
Order number **LBB3015/04**

Accessories

LBB 9095/50 Ear pads for LBB 3015 LBB 9095 (25 pairs)
Replacement ear pads for LBB 3015 LBB 9095 (25 pairs).
Order number **LBB9095/50**

LBB 9095/30 Interpreter Headphones

Features

- Durable and dynamic
- Replaceable ear pads
- High-quality sound reproduction

Lightweight, dynamic headphones for direct connection to DCN-IDESK Interpreters Desk.

Functions

Interconnections
- 2.2 m (7 ft) cable terminated with a 6.3 mm (0.25 in) stereo jack plug

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	720 ohm per earpiece
Audio frequency response	250 Hz - 13 kHz (-10 dB)
Power handling capacity	200 mW
Sensitivity (1 kHz)	97 dB SPL/earpiece at 0 dBV/system
	96 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	125 g (0.28 lb)
Color	Black/grey

Ordering information

LBB 9095/30 Interpreter Headphones
Interpreter headphones, lightweight, dynamic.
Order number **LBB9095/30**

Accessories

LBB 9095/50 Ear pads for LBB 3015 LBB 9095 (25 pairs)
Replacement ear pads for LBB 3015 LBB 9095 (25 pairs).
Order number **LBB9095/50**

Central Equipment

The Central Control Unit DCN-CCU2 or DCN-CCUB2 forms the heart of the conference management system. Both CCUs can operate standalone to provide automatic conference control, or be accessed by an operator via a PC when more extensive management is required.
In combination with the DCN-WAP, the DCN-CCU2 also forms the heart of a DCN Wireless system, or wireless flexibility can be added to a wired DCN Next Generation system for temporary system expansion.
The DCN-CCU2 can control up to 245 wired contribution units (such as delegate and chairman units, interpreter desks) and up to 245 wireless discussion units. If more capacity is required, multiple DCN-CCU2s can be connected to each other to control up to 4000 microphone positions.
The DCN-CCUB2 can control up to 245 wired contribution units and cannot be extended with wireless units or multiple CCUs.
Both CCUs can also provide power for a number of contribution units. The maximum number depends on the type of contribution units used in the application.

Advanced audio coupling using the DCN-CCU2
Via the optical network, a variety of audio couplings are possible, including coupling small systems with a few languages into a large system with as many as 31 languages.
It is also possible to extract and insert both digital (AES/EBU or SPDIF) and analog audio. Other advanced audio coupling techniques include CobraNet™.
CobraNet™ is a combination of software, hardware and network protocol, which allows distribution of many real-time, high-quality digital audio channels over an Ethernet network using CAT5 cables.
CobraNet™ makes it easy to distribute audio in buildings and connect the DCN system to other audio CobraNet™-compatible devices such as Audio Recorders and Audio Mixers.

DCN-CCU2 Central Control Unit

Features

- For DCN Next Generation or DCN wireless systems, or a combination of the two
- In single-CCU; maximum 245 wired contribution units, plus 245 wireless delegate units
- For multi-CCU systems, with up to 30 CCU's and a total of 4000 contribution units
- Voice activated microphone mode for wired and wireless systems
- Ethernet connection for configuration and control computers

The Central Control Unit (CCU) includes features for controlling wired and wireless delegate microphones, distributing simultaneous interpretation and conducting voting sessions, all without an operator.
In combination with a PC, this control unit brings greater sophistication to conference control. Users can access an extensive range of software modules, each with a specific function in controlling and monitoring a conference. These modules greatly expand the capacity to manage a conference. In the event of PC failure, this control unit will revert to its stand-alone operation mode, enabling the conference to proceed.

Functions

- For DCN Next Generation or DCN wireless systems, or a combination of the two (Maximum one DCN-WAP per system)
- Basic microphone management facilities
- Four operational microphone modes:
  - Open: microphone button control with request-to- speak (Auto)
  - Override: microphone button with override of activated microphones (FIFO)
  - Voice: voice activated microphones
  - Push-to-talk (push and hold button to speak)
- Number of open microphones between 1 and 4
- Configuration of CCU and system via a display and a single rotary push button
- Basic voting control for parliamentary voting procedure. Delegates can register 'Present', 'Yes', 'No' and 'Abstain'. The Concentus Chairman unit can start, stop and suspend the voting. The total results can be displayed on hall displays and on the LCD screens of the units
- A page function which activates a voting tone. With this tone the chairman can indicate that a voting round is about to start
- Simultaneous interpretation function with 31 language channels plus one floor channel
- Distribution of up to 10 language channels plus floor to DCN wireless discussion units
- Distribution of up to 31 language channels plus floor to Integrus receivers, DCN wired channel selectors
- Basic intercom function with function to assign intercom operator and intercom chairman (both can be called from the interpreter desk)
- Stand-alone automatic camera control
- Extended conference facilities when using control PC software or remote controllers
- Adjustable sensitivity for the audio inputs
- Adjustable level for the audio outputs
- Audio insertion facility to connect external audio processing devices or telephone couplers
- The CCU can be assigned a unique name by the installer for easy identification
- VU meter readings to monitor audio inputs and audio outputs. The audio can be monitored using a headphone
- 19" (2U) housing for tabletop or rack mounting
- Handgrips for easy transportation

Controls and Indicators

Front
- Power on/off switch
- 2 x 16 Character LCD display for status information and configuration
- Rotary control to navigate through the LCD menus

Back
- Three red LED overload indicators for the DCN network outputs
- Two red LED overload indicators for the optical connections
- Green and yellow LED indicating Ethernet activity

Interconnections

Front
- One stereo headphone output 3.5 mm (0.14 in)

Back
- Euro power socket with built-in fuse
- Three DCN outlet sockets including locking facility for connection of units
- Two optical network connections for connection of Integrus, various audio expanders, CobraNet interfaces and Wireless Access Point
- Two three-pole XLR balanced audio line inputs with galvanic separation
- Two stereo Cinch unbalanced audio line inputs
- Two three-pole XLR balanced audio line output with galvanic separation
- Two stereo Cinch unbalanced audio line outputs
- One Ethernet connection for Control PC, Open Interface or slave CCU
- One RS-232 serial data connector for controlling cameras
- One error switch, galvanic separated cross-over switch to trigger external equipment in case of errors detected by the CCU

Certifications and approvals

Region	Certification
Europe	CE

Parts included

Quantity	Component
1	DCN-CCU2 Central Control Unit
1	Set of mounting brackets for 19” rack
1	Set of feet
1	System installation and user instruction on DVD
1	US power cord
1	Euro power cord

Technical specifications

Electrical

Supply voltage	100-240 Vac 50-60 Hz
Power consumption	360 W
DCN system supply	40 Vdc, max 85 W per DCN socket
Optical network supply	40 Vdc, max 65 W
Total power supply	320 W
RS-232 connection	1 x nine-pole Sub-D female socket
Frequency response	30 Hz - 20 kHz (-3 dB at nominal level)
THD at nominal level	< 0.5 %
Cross talk attenuation	> 85 dB at 1 kHz
Dynamic range	> 90 dB
Signal-to-noise ratio	> 87 dBA

Audio inputs

XLR nominal input	-12 dBV (+/- 6 dB)
XLR maximum input	+12 dBV
Cinch nominal input	-24 dBV (+/- 6 dB)
Cinch maximum input	+0 dBV

Audio outputs

XLR nominal output	-12 dBV (+6 / -24 dB)
XLR maximum output	+12 dBV
Cinch nominal output	-24 dBV (+6 / -24 dB)
Cinch maximum output	+0 dBV

Mechanical

Mounting	Tabletop or mounted in a 19” rack
Dimensions (H x W x D)	
for tabletop use, with feet	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19” rack use, with brackets	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	7.9 kg (17.5 lbs)
Color	Charcoal (PH 10736) with silver

Ordering information

DCN-CCU2 Central Control Unit
DCN Next Generation central control unit for controlling delegate microphones, distributing simultaneous interpretation, and conducting voting sessions.
Order number **DCN-CCU2**

DCN-CCUB2 Central Control Unit Basic

Features

- Cost effective solution for basic DCN Next Generation systems
- Maximum 245 wired contribution units
- Ethernet connection for configuration and control computers

The Central Control Unit (CCU) includes features for controlling wired delegate microphones, distributing simultaneous interpretation and conducting voting sessions, all without an operator.
In combination with a PC, this control unit brings greater sophistication to conference control. Users can access an extensive range of software modules, each with a specific function in controlling and monitoring a conference. These modules greatly expand the capacity to manage a conference. In the event of PC failure, this control unit will revert to its stand-alone operation mode, enabling the conference to proceed.

Functions

- For wired DCN Next Generation systems
- Basic microphone management facilities
- Four operational microphone modes:
  - Open: microphone button control with request-to- speak (Auto)
  - Override: microphone button with override of activated microphones (FIFO)
  - Voice: voice activated microphones
  - Push-to-talk (push and hold button to speak)
- Number of open microphones between 1 and 4
- Configuration of CCU and system via a display and a single rotary push button
- Basic voting control for parliamentary voting procedure. Delegates can register ‘Present’, ‘Yes’, ‘No’ and ‘Abstain’. The Concentus Chairman unit can start, stop and suspend the voting. The total results can be displayed on hall displays and on the LCD screens of the units
- A page function which activates a voting tone. With this tone the chairman can indicate that a voting round is about to start
- Simultaneous interpretation function with 31 language channels plus one floor channel
- Distribution of up to 31 language channels plus floor to DCN wired channel selectors
- Basic intercom function with function to assign intercom operator and intercom chairman (both can be called from the interpreter desk)
- Stand-alone automatic camera control
- Extended conference facilities when using control PC software or remote controllers
- Adjustable sensitivity for the audio inputs
- Adjustable level for the audio outputs
- Audio insertion facility to connect external audio processing devices or telephone couplers
- The CCU can be assigned a unique name by the installer for easy identification
- VU meter readings to monitor audio inputs and audio outputs. The audio can be monitored using a headphone
- 19” (2U) housing for tabletop or rack mounting
- Handgrips for easy transportation

Controls and Indicators

Front
- Power on/off switch
- 2 x 16 Character LCD display for status information and configuration
- Rotary control to navigate through the LCD menus

Back
- Three red LED overload indicators for the DCN network outputs
- Green and yellow LED indicating Ethernet activity

Interconnections

Front
- One stereo headphone output 3.5 mm (0.14 in)

Back
- Euro power socket with built-in fuse
- Three DCN outlet sockets including locking facility for connection of units
- Two stereo Cinch unbalanced audio line inputs
- One three-pole XLR balanced audio line output
- Two stereo Cinch unbalanced audio line outputs
- One Ethernet connection for Control PC or Open Interface
- One RS-232 serial data connector for controlling cameras

Certifications and approvals

Region	Certification
Europe	CE

Parts included

Quantity	Component
1	DCN-CCUB2 Central Control Unit Basic
1	Set of mounting brackets for 19” rack
1	Set of feet
1	System installation and user instruction on DVD
1	US power cord
1	Euro power cord

Technical specifications

Electrical

Supply voltage	100-240 Vac 50-60 Hz
Power consumption	295 W
DCN system supply	40 Vdc, max 85 W per DCN socket
Total power supply	255 W
RS-232 connection	1 x nine-pole Sub-D female socket
Frequency response	30 Hz - 20 kHz (-3 dB at nominal level)
THD at nominal level	< 0.5 %
Cross talk attenuation	> 85 dB at 1 kHz
Dynamic range	> 90 dB
Signal-to-noise ratio	> 87 dBA

Audio inputs

Cinch nominal input	-24 dBV (+/- 6 dB)
Cinch maximum input	+0 dBV

Audio outputs

XLR nominal output	-12 dBV (+6 / -24 dB)
XLR maximum output	+12 dBV
Cinch nominal output	-24 dBV (+6 / -24 dB)
Cinch maximum output	+0 dBV

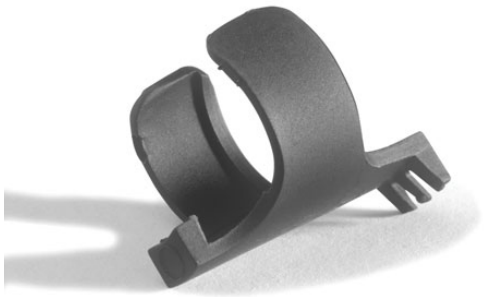
Mechanical

Mounting	Tabletop or mounted in a 19” rack
Dimensions (H x W x D)	
for tabletop use, with feet	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19” rack use, with brackets	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	7.9 kg (17.5 lbs)
Color	Charcoal (PH 10736) with silver

Ordering information

DCN-CCUB2 Central Control Unit Basic
DCN Next Generation basic central control unit for controlling delegate microphones, distributing simultaneous interpretation, and conducting voting sessions.
Order number **DCN-CCUB2**

DCN-DISCLM Cable Clamp (25 pcs)



The cables can be secured to the DCN-CCU2 trunk outputs using the DCN-DISCLM cable clamp to prevent them from being pulled out accidentally.

Technical specifications

Mechanical

Mounting	Click and fit on any Discussion unit
Color	Charcoal (PH 10736)

Ordering information

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

DCN-WAP Wireless Access Point

Features

- Secure wireless communication with 128-bits AES Rijndael encryption
- Single cable to power WAP and communicate with CCU
- Mountable on ceiling, wall, or floor stand for best reception
- Typical range 30 m (100 ft)
- Compact and elegant award winning design

The DCN Wireless Access Point (WAP) links the central control unit (CCU) and the wireless discussion units by means of secure wireless communication with 128-bits AES Rijndael encryption. It uses one of the three non-overlapping-carriers in the 2.4 GHz band, which is license-free worldwide. For extra confidentiality an automatic blocking function prevents subscription of unauthorized wireless discussion units.

The WAP is linked to the CCU using Bosch's proprietary optical network, which provides digital optical communication and power supply over a single cable. The second optical network connector on the WAP allows the system network to be expanded from a single branch to a redundant loop configuration. In this 'loop-through' configuration, DCN Wireless can be interfaced with compatible Bosch equipment such as Audio Expanders, CobraNet™ interfaces and the Integrus language distribution system.

The WAP award winning design enables it to be placed unobtrusively on a wall, ceiling, or floor stand by using the universal mounting bracket.

Functions

Controls and Indicators
- LEDs show status of wireless system

Interconnections
- Two optical network connections (second connection can be used in 'loop-through' network)

Certifications and approvals

Region	Certification
Europe	CE

Installation/configuration notes

DCN-WAP mounted on a LBC 1259/01 floor stand

Technical specifications

Electrical

Power consumption	4 W

Mechanical

Mounting	Ceiling, Wall or Floor Stand (using included bracket)
Dimensions (H x W x D) with bracket	59 x 284.5 x 201 mm (2.3 x 11.2 x 7.9 in)
Weight with bracket without bracket	 907 g (2 lb) 643 g (1.4 lb)
Color	Light grey (RAL 000 7500)

Ordering information

DCN-WAP Wireless Access Point
DCN Next Generation wireless access point, light gray. Universal mounting bracket included.
Order number **DCN-WAP**

Accessories

DCN-WFCCCU Flight Case for CCU and WAP
DCN Next Generation flight case for CCU and WAP, light gray. Can hold wireless access point, optical cable, two central control units or one central control unit.
Order number **DCN-WFCCCU**

LBC 1259/01 Universal Floorstand
Universal floor stand lightweight aluminum construction, foldable, M10 x 12 reducer flange.
Order number **LBC1259/01**

LBC 1259/01 Universal Floorstand

Features

- Multi-purpose, lightweight aluminum stand
- For mounting a loudspeaker, wireless access point or Integrus radiator
- Double-braced folding base
- Reducer flange for different mountings
- Hand-adjustable

This universal floorstand provides effective mounting solutions for loudspeaker installations, a Wireless Access Point of the DCN-Wireless system, or a radiator of the Integrus digital language distribution system. They are manufactured and finished to the same high standards as all Bosch products, assuring excellent quality and guaranteed compatibility throughout the range. The LBC 1259/01 is suited to a wide range of applications where a secure yet transportable mounting solution is required.

Functions

Adjustable and safe

The LBC 1259/01 floorstand is hand-adjustable using a spring-loaded locking screw for heights between 1.4 and 2.2 m (4.6 and 7.2 ft). An extra safety bolt on the support can be tightened to ensure the stand remains extended.
This lightweight stand has a double-braced folding base for extra strength, and a wide leg span to ensure stability.

Adaptable

The floorstand is standard supplied with a 36 mm (1.42 in) reducer flange with an M10 x 12 threaded pin to mount different sized equipment, and with an M10 knob to fix the Wireless Access Point mounting bracket.

Accessories

For storage and ease of transport, a carrier bag is available with two inside compartments with separate zippers for holding two universal floorstands (LBC 1259/01). The bag, with Bosch logo, is made from sturdy black weather-proof nylon. Two handles are fitted for carrying the bag by hand or over the shoulder.

LM1-CB Carrier Bag (optional)

Installation/configuration notes

LBC 1259/01 with DCN Wireless Access Point, LBB 451x/00 Infra--red Radiator and XLA 3200 Line Array Loudspeaker

Parts included

Quantity	Component
1	LBC 1259/01 Universal Floorstand
1	36 mm (1.42 in) reducer flange with (M10 x 12) threaded pin
1	M10 securing knob for WAP mounting bracket
2	Metal filler rings

Technical specifications

Mechanical

Length: standing	1.4 to 2.2 m (4.6 to 7.2 ft)
Length: folded	1.24 m (4.06 ft)
Width: legs extended	1.32 m (4.33 ft)
Width: legs folded	130 mm (5.1 in)
Weight	4.8 kg (10.58 lb)
Max. centric load	50 kg (110.2 lb)
Material	Aluminum/steel

Color	White aluminum (RAL 9006) with black parts
Tube diameter	35 mm (1.37 in)
Carrier bag accessory	
Dimensions (L x D)	1.25 m x 27 mm (49 x 1.06 in)
Weight	750 g (1.65 lb)
Color	Black with light grey handles
Material	Nylon

Ordering information

LBC 1259/01 Universal Floorstand
Universal floor stand lightweight aluminum construction, foldable, M10 x 12 reducer flange.
Order number **LBC1259/01**

Accessories

LM1-CB Carrier Bag for two floorstands
Carrying bag for storing and transporting two floor stands.
Order number **LM1-CB**

DCN-EPS Extension Power Supply

Features

- Easy to connect to DCN
- Maximum supply power of 255 W
- Built-in DCN network splitter allows installation at any convenient point in the system cabling
- Loop-through cabling
- Switches on automatically when the CCU is switched on

The Extension Power Supply unit is used in combination with a CCU to supply extra power to the DCN network.

Functions

Controls and Indicators
- "Power on" LED indicator
- Three indicators to indicate DCN outlet overload (red LEDs)

Interconnections
- Euro power socket with built-in fuse holder
- 2 m (78.7 in) DCN cable with molded six-pole circular connector
- Six-pole circular socket for loop-through connection to the DCN network
- Three DCN outlet sockets for connection of units, plus extension power supplies. Each socket is protected against short-circuit (3 x six-pole circular sockets)

Parts included

Quantity	Component
1	DCN-EPS Extension Power Supply
1	Power cord 1.7 m (66.9 in)

Technical specifications

Electrical

Supply voltage	105, 115, 125, 220, 230, 240 VAC
Power consumption	350 W
DCN system supply	40 VDC, max 85 W per DCN socket

Mechanical

Mounting	Free-standing on a tabletop or mounted in a 19" rack unit (required 2U, 19" width)
Dimensions (H x W x D)	100 x 220 x 308 mm (3.9 x 8.7 x 12.1 in)
Weight	8.3 kg (18.3 lbs)
Color cabinet	Charcoal (PH 10736)
Color handles	Charcoal (PH 10736)

Ordering information

DCN-EPS Extension Power Supply
DCN Next Generation extension power supply for all regions, except North-America.
Order number **DCN-EPS**

DCN-EPS-UL Extension Power Supply UL/CSA
DCN Next Generation extension power supply, UL/CSA for the North-America region.
Order number **DCN-EPS-UL**

LBB 4402/00 Audio Expander

Features

- Stylish and modern design (IF award)
- Room coupling facility
- Versatile audio distribution facility
- Optical network for coupling to the CCU
- Redundant network capability

The audio expander can contribute audio to and distribute audio from the system. Typical applications are room coupling and audio distribution.

Functions

- Redundant network cabling can be either single branch or redundant loop
- Audio line inputs (of which 2 can be configured as microphone input) for floor and interpretation channels
- Audio line outputs for floor and interpretation channels
- Flexible routing of floor and interpretation channels
- Adjustable sensitivity for the audio inputs
- Adjustable level for the audio outputs
- Configuration of the Audio Expander via a display and a single rotary/push button
- Each Audio Expander can be assigned a unique name by the installer for easy identification
- VU meter readings to monitor audio inputs and audio outputs. The audio can be monitored using a headphone
- 19" (2U) housing for table top or rack mounting
- Handgrips for easy transportation
- The unit is powered from the network

Controls and Indicators

- 2 x 16 Character LCD display for status display and configuration of the Audio Expander
- Rotary/push control to navigate through the LCD menus

Interconnections

Front

- One stereo headphone output 3.5 mm (0.14 in)

Back

- Two optical network connections for connecting to the CCU
- Four three-pole XLR balanced audio line inputs with galvanic separation
- Four stereo Cinch unbalanced audio line inputs
- Four three-pole XLR balanced audio line outputs with galvanic separation
- Four stereo Cinch unbalanced audio line outputs
- Eight control inputs to enable audio inputs and audio outputs
- Five control outputs to indicate channel engaged state

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Supply voltage	24 to 48 VDC
Power consumption	7.6 W (DC)
Frequency response	30 Hz to 20 kHz (-3 dB at nominal level)
THD at nominal level	<0.5%
Crosstalk attenuation	>85 dB at 1 kHz
Dynamic range	>90 dB
Signal-to-noise ratioo	>87 dBA
Audio line inputs	
XLR nominal input	0 dBV (±6 dB)
XLR maximum input	+12 dBV
Cinch nominal input	+12 dBV (±6 dB)
Cinch maximum input	0 dBV
Audio mic inputs	
Nominal input	57 dBV (±6 dB)
Maximum input	26 dBV
Phantom supply	12 V ±1 V at 15 mA
Audio line outputs	
XLR nominal output	12 dBV (+6 / -24 dB)
XLR maximum output	+12 dBV
Cinch nominal output	24 dBV (+6 / -24 dB)
Cinch maximum output	0 dBV

Mechanical

Dimensions (H x W x D)	
for tabletop use, with feet	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19" rack use, with brackets	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	7 kg (15.4 lbs)

Mounting	Tabletop, 19”-rack
Color	Charcoal (PH 10736) with silver

Ordering information

LBB 4402/00 Audio Expander
Audio expander, provides 4 audio inputs, 4 audio outputs, 8 control inputs, and 5 control outputs to a Praesideo system, powered from Praesideo network, rack unit 2 RU.
Order number **LBB4402/00**

PRS-4DEX4 Audio Expander Digital

Features

- Stylish and modern design (IF award)
- Room coupling facility
- Versatile audio distribution facility
- AES/EBU or SPDIF
- Sample-rate converters (8 – 96 kHz)

The digital audio expander can contribute audio to and distribute audio from the system. Typical applications are room coupling and audio distribution.

Functions

- Automatic Gain Control
- Audio input channels for floor and interpretation channels
- Audio output channels for floor and interpretation channels (16-bit 44.1 kHz)
- Flexible routing of floor and interpretation channels
- Configuration of the Digital Audio Expander via a display and a single rotary push button
- Each Digital Audio Expander can be assigned a unique name by the installer for easy identification
- VU meter readings to monitor audio inputs and audio outputs. The audio can be monitored using headphones
- 19” (2U) housing for tabletop or rack mounting
- Handgrips for easy transportation
- Unit is powered from the network

Controls and Indicators

- 2 x 16 Character LCD display for status display and configuration of the Audio Expander
- Rotary control to navigate through the LCD menus

Interconnections

Front

- One stereo headphone output 3.5 mm (0.14 in)

Back

- Two optical network connections for connecting to CCU
- Two 3-pole XLR AES/EBU stereo inputs for 2 audio channels per input
- Two Cinch SPDIF stereo inputs for 2 audio channels per input
- Two 3-pole XLR AES/EBU stereo outputs for 2 audio channels per output
- Two Cinch SPDIF stereo outputs for 2 audio channels per output
- Eight control inputs to enable audio inputs and audio outputs
- Five control outputs to indicate channel engaged state

Certifications and approvals

Region	Certification
Europe	CE

Parts included

Quant.	Component
1	PRS-4DEX4 Digital Audio Expander
1	Set of mounting brackets for 19” rack
1	Set of feet
1	Set of connectors

Technical specifications

Electrical

Supply voltage	24 to 48 VDC
Power consumption	6 W
Frequency response	30 Hz - 20 kHz
THD at nominal level	< 0.5 %

Mechanical

Mounting	Tabletop or mounted in a 19” rack
Dimensions (H x W x D)	
for tabletop use, with feet	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19” rack use, with brackets	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	6 kg (13.2 lbs)
Color	Charcoal (PH 10736) with silver

Ordering information

PRS-4DEX4 Audio Expander Digital
Digital audio expander to send external audio to the system and extract audio from the system.
Order number **PRS-4DEX4**

LBB 4404/00 CobraNet Interface

Features

- Stylish and modern design (IF award)
- Room coupling facility
- Versatile audio distribution facility
- CobraNet™ compatible using Ethernet
- Optical network for coupling to the CCU

The CobraNet™ Interface can interface audio from the DCN system to a CobraNet™ network using standard Ethernet networks. Typical applications are room coupling and audio distribution over long distances. CobraNet™ is a registered trademark of Peak Audio, a Division of Cirrus Logic, Inc.

Functions

- Redundant network cabling can be either single branch or redundant loop
- Flexible routing of floor and interpretation channels
- Configuration of the CobraNet™ Interface audio channel routing via a display and a single rotary push button
- Automatic Gain Control
- Configuration of the CobraNet™ Interface with software tools included
- Each CobraNet™ Interface can be assigned a unique name by the installer for easy identification
- VU meter readings to monitor audio inputs and audio outputs. The audio can be monitored using a headphone
- 19" (2U) housing for table top or rack mounting
- Handgrips for easy transportation
- The unit is powered from the network

Controls and indicators

- 2 x 16-character LCD display for status display and audio channel routing of the CobraNet™ Interface
- Rotary control to navigate through the LCD menus

Interconnections

Front

- One stereo headphone output 3.5 mm (0.14 in)

Back

- Two optical network connections
- Two RJ45 Ethernet connectors for the CobraNet™
- Eight control inputs to enable audio inputs and audio outputs for floor and interpretation channels
- Five control outputs to indicate channel engaged state

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Supply voltage	24 to 48 VDC
Power consumption	10.5 W (DC)
Frequency response	30 Hz to 20 kHz
THD at nominal level	<0.5%
CobraNet™	
Physical layer	Ethernet
Channels	4 in / 4 out per interface Max 64 on CobraNet™
Compliance	IEEE 802.3
Audio Transport	16 / 20 / 24-bit
Sample Rate	48 kHz
Latency	5.33 ms

Mechanical

Dimensions (H x W x D)	
for tabletop use, with feet	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19" rack use, with brackets	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	7 kg (15.4 lbs)
Mounting	Tabletop, 19"-rack
Color	Charcoal (PH 10736) with silver

Ordering information

LBB 4404/00 CobraNet Interface
CobraNet interface, converts 4 audio channels from Praesideo to CobraNet on standard 100Base-T Ethernet and 4 audio channels back, powered from Praesideo network, rack unit 2 RU.
Order number **LBB4404/00**

DCN-FCCCU Flight Case for 2 Central Control Units

Features

- Robust construction with reinforced corners
- Easy to carry and store
- Shaped interior
- Holds up to two 19” units

The DCN-FCCCU flight case accommodates two 19” units, e.g. 1 central control unit (CCU) + 1 transmitter or 1 audio expander unit.

Technical specifications

Mechanical

Dimensions (H x W x D)	510 x 460 x 290 mm (20.1 x 18.1 x 11.4 in)
Weight	6 kg (13.2 lb)
Color	Light grey

Ordering information

DCN-FCCCU Flight Case for 2 Central Control Units
DCN Next Generation flight case for two 19” units: CCU, audio expander, transmitter.
Order number **DCN-FCCCU**

DCN-WFCCCU Flight Case for CCU and WAP

Features

- Robust construction with reinforced corners
- Easy to carry and store
- Shaped interior
- Holds WCCU, WAP and network cabling

The DCN-WFCCU Flight Case provides a secure transportation and storage solution for:

- a Wireless Central Control Unit, Wireless Access Point and optical network cable
- 2 x Wireless Central Control Units (if dividing foam partition is removed from case)

Technical specifications

Mechanical

Dimensions (H x W x D)	480 x 510 x 295 mm (18.9 x 20.1 x 11.46 in)
Weight	6 kg (13.2 lb)
Color	Light grey

Ordering information

DCN-WFCCCU Flight Case for CCU and WAP
DCN Next Generation flight case for CCU and WAP, light gray. Can hold wireless access point, optical cable, two central control units or one central control unit.
Order number **DCN-WFCCCU**

PRS 1AIP1 IP Audio Interface

Features

- All-in-one solution for audio transport on IP-networks
- Supervised control inputs and outputs
- Supports re-broadcasting
- Configurable audio delay on the output for loudspeaker alignment
- Easy to install and configure via standard web-browser

The PRS-1AIP1 is a universal, IP-based audio device supporting VoIP and Audio over IP applications. It is an ideal solution for bridging audio and contact closures over long distance LAN and WAN networks, e.g. in and between conference centers and/or in remote interpretation applications. It extends and interfaces to DCN systems and non-network based traditional conference and public address systems without the need for a PC during operation.
The unit has analog audio inputs and outputs for easy interfacing. One audio input can be switched to microphone sensitivity with built-in microphone supervision. Also, the control inputs offer cable and connection supervision.
Control inputs and outputs can be used to pass channel engaged events to the DCN system.

Functions

Audio

Multiple audio formats are supported: single channel, full duplex 16-bit PCM or G.711 for very low latency, and two-channel send or receive MP3 for high quality audio with various sample rates and compression settings.
The unit provides two balanced line inputs and two balanced line outputs. One of the inputs can be configured as balanced microphone input with a phantom power supply for electret / condenser microphones. The output level is configurable.
A configurable audio delay can be used to artificially delay the playback of audio for loudspeaker alignment.

Audio Routing

Audio signals can be routed in uni-cast to up to 16 receivers, preconfigured or on activation of control inputs. Receivers are able to re-broadcast the incoming audio stream to other receivers. In case the interfaces are on the same LAN also broadcast is supported.

In PCM and G.711 (uLaw and aLaw) full duplex audio interfacing between two units is possible.

Control inputs and outputs

The unit has eight control inputs. Eight control outputs have dry relay contacts. Control inputs can be routed to control outputs for remote actions or to pass on fault information between audio transmitter and receiver, in both directions. Control inputs can also be configured to change the audio routing.
An additional dry relay contact is provided for fault indication of the unit, including a high temperature fault situation.

Network Interfaces

The unit interfaces to 10 and 100 Mbit Ethernet networks and announces its IP-address that was given by a DHCP server. It can also search the network for a free IP-address or can be given a static IP-address. A second Ethernet connection is available to support network redundancy.
An RS 232 interface is build-in to communicate additional serial data over the IP network.

Power Supplies

Two power supply connections are provided as main input and backup input with supervision of both supplies.

Controls and Indicators (front)

- Reset button, recessed
- Two status indicator LEDs for network
- Eight status LEDs for control inputs

Interconnections (rear)

- Eight control inputs on Euro-connector
- Eight control outputs on Euro-connector
- Fault relay output on Euro-connector
- Two balanced audio inputs on Euro-connector (one line input, one line / microphone input)
- Two balanced audio outputs on Euro-connector
- Two Ethernet connections on RJ45
- RS 232 on Sub-D
- RS 485 on Euro-connector (future use)
- Main power supply on jack
- Backup power supply on Euro-connector

Certifications and approvals

Safety	acc. to IEC 60065-98
Immunity	acc. to EN 55103-2 / EN 50130-4 / EN 55024
Emissions	acc. to EN 55103-1 / EN 55022
Emergency	acc. to EN 60849

Parts included

Quantity	Component
1	PRS-1AIP1 IP Audio Interface
1	Power supply
1	Set of connectors

Technical specifications

Electrical

External power supply 1	18 to 56 VDC
External power supply 2	18 to 56 VDC
Power consumption	8 W max
Microphone input	
Sensitivity	-48.5 to -26 dBV
Impedance	1360 ohm
Frequency response	100 Hz to 15 kHz
S/N	>60 dB
Supervision detection	Electret: 0.4 – 5 mA Dynamic: 120 – 1300 ohm
Line Inputs	
Sensitivity	-16.5 to +6 dBV
Impedance	22 kohm
Frequency response	20 Hz to 15 kHz
S/N	>70 dB
Pilot tone detection level (input 2 only)	-30 dBV
Line outputs	
Level	6 dBV max
Pilot tone level (output 2 only)	-20 dBV (20 kHz)
Audio formats	
MPEG 1-layer 3 (MP3)	32, 44.1 and 48 kHz sample rate
	Encoding up to 192 kbps VBR
	Decoding up to 320 kbps (stereo)
MPEG 1-layer 2	16, 22.05 and 24 kHz sample rate
G.711	uLaw, aLaw at 8, 24 or 32 kHz sample rate
PCM	16-bit at 8, 24 or 32 kHz sample rate
Control inputs	8 x
Connectors	Removable screw terminals
Operation	Closing contact (with supervision)
Control / fault outputs	8 x / 1 x
Connectors	Removable screw terminals
Operation	Make contact (SPST, voltage free)
Rating	24 V, 0.5 A
Ethernet	
Connector	Dual RJ45, DTE-pinout
Standard	802.3i / 802.3u
Speed	10 / 100 Mbps, auto-negotiation
Flow	Full / half-duplex, auto-negotiation
Protocol	TCP/IP, UDP, RTP, IGMP, DHCP, SNMP
RS 232	
Connector	9-pin Sub-D male, DTE-pinout
Pinout	300 to 115.200 Baud
Setting (default)	9600, 8, N, 1

Mechanical

Dimensions (H x W x D)	216 x 38 x 125 mm(8.5 x 1.5 x 4.92 in) (half 19" wide)
Weight	0.7 kg (1.5 lb)
Mounting	Stand-alone or in 19"-rack with additional frame
Color	Silver with Charcoal

Environmental

Operating temperature	-5 ºC to +50 ºC (+23 ºF to +122 ºF)
Start-up temperature	0 ºC to +50 ºC (+32 ºF to +122 ºF)
Storage temperature	-20 ºC to +70 ºC (-4 ºF to +158 ºF)
Humidity	15 to 90 %
Air pressure	600 to 1100 hPa

Ordering information

PRS-1AIP1 IP Audio Interface
Compact bi-directional 1 or 2 channel interface for supervised audio with RS232/485 tunnel and GPIO.
Order number **PRS-1AIP1**

Conference Software Suite

Conference Software Suite (DCN-SW range*)
Bosch is introducing a new, state-of-the-art software suite for its DCN Next Generation Conference System and Wireless Discussion System. Remarkably ergonomic, this software suite makes it simpler than ever to set up and manage meetings and conferences. Featuring sophisticated interfacing options, the software has been created according to the very latest technology standards. Flexible both in operation and in its range of functionality, the Bosch DCN Conference Software Suite offers powerful support and control in a user-friendly package. As the Conference Software Suite is being introduced in phases, not all functionality is available at the moment. In cases when required functionality is missing in the new Conference Software Suite, the classic PC software will be an alternative.
** Except DCN-SWSMV which is a dedicated software application for smaller systems. See next chapter for more information about the DCN-SWSMV (Smart Control Software)*

Software Overview
The following table provides an overview of the software modules available for the new Conference Software Suite and classic software portfolio. Refer to the classic PC software chapter if required functionality is not yet available in the new Conference Software Suite.

	Suite	Classic
Microphone Management	•	•
Synoptic Control	•	•
System Installation	•	•
Parliamentary Voting	•	•
Delegate Database	•	•
Simultaneous Interpretation	•	•
Attendance Registration	•	•
ID Card Encoding	•	•
Message Distribution	•*	•
Video Display	•	•
Camera Control	•**	•
HD Camera Control	•	
Multi-PC	•	•
Multi-Voting	•	•
Text/Data Display		•
Intercom		•
Application Programming Interface	•	

Available functions overview
* Only speak-slowly and help indicators
** Stand Alone Camera Control software

Available languages

Catalan
Chinese (simplified)
Czech
Dutch
English
French
Finnish
German
Hungarian
Indonesian
Italian
Japanese
Korean
Lithuanian
Norwegian
Polish
Portuguese
Russian
Slovakian
Slovenian
Spanish
Swedish
Thai
Vietnamese

Available languages overview

Activating software
The DCN software (both suite and classic) is protected with a license key. The license key depends on the CCU and the set of software modules. This means that an individual license key is required per CCU.

DCN-SW Conference Software Main Module

Features

- Meeting & Agenda
- User management
- Client server solution
- Optimized for Microsoft Windows 7
- Off-line configuration

The DCN-SW Conference Software Main Module is used as a platform on which all other software modules run. Basic functions are included where others can be added depending on the functionality required.

System overview

The DCN-SW Conference Software Main Module is build as a client server solution and consists of four software components:

- The server provides management, control and monitoring of the DCN Next Generation System or DCN Wireless Discussion system.
- The configuration application provides system installation and meeting preparation.
- The operator application provides system monitoring and meeting control.
- The print application provides printing of voting results.

All DCN-SW applications can, but not necessary need to be run on separate computers and integrate seamlessly with each other. This allows the possibility for assigning functionality to different users and/or PCs – for instance, let one or more users configure the set-up and register delegates (configuration application), and another person actually control the meeting on a separate pc (operator application). Contextual help file provides instant support for all applications.

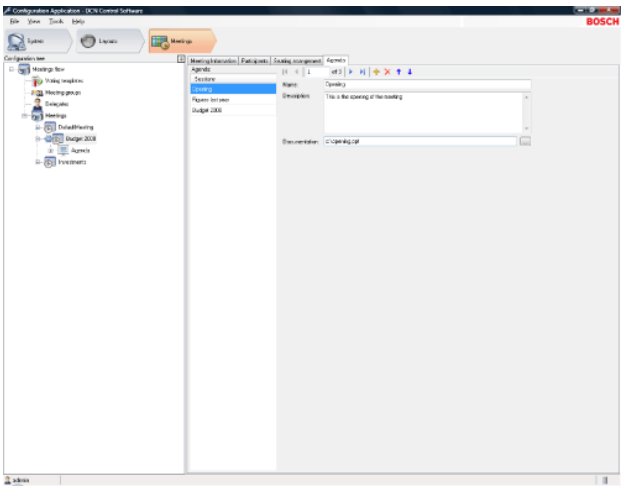
1	DCN-SW Server
2	Vote results print application
3	Remote Configuration application
4	Remote Operator application (Multi PC license required)
5	Touch screen
6	Ethernet connections
7	CCU2 (single)
8	CCU2 (master)
9	Bosch optical network
10	CCU2 (slave)

Functions

The server

- Monitor and control of the conference data.
- It runs on the background and links all applications.
- SQL database stores all data and settings.
- Status report of database connection and system connection.
- Error logging for quick diagnostics.

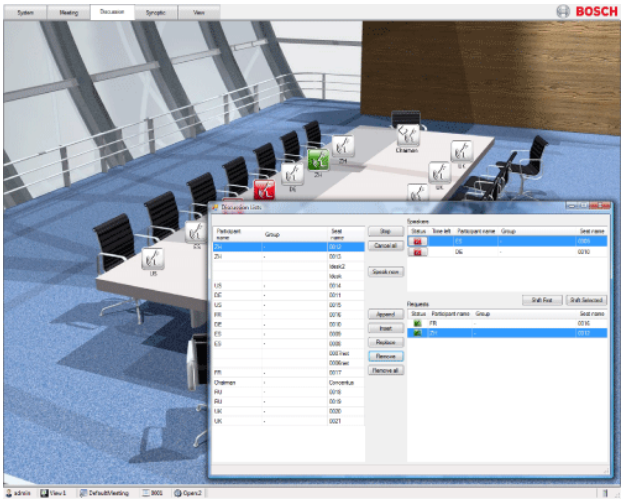
Configuration application



- Easy step-by-step pre-configuration which makes it exceptionally ergonomic.
- Off-line system configuration.

- Administrator user management: defining users and user groups with group privileges like view- and control rights.
- Installer system setup: defining seats and synoptic layouts.
- Operator meeting preparation: voting templates, participating delegates, authorizations for each meeting, the agenda, lists of speakers and voting scripts.

Operator application



- Full meeting control.
- Touch screen optimized.
- Ribbon technology giving the user a graphical representation of all main functions, which makes it very intuitive to use.
- Functionality depending on user rights and system license.
- Synoptic microphone control, voting results, Individual microphone sensitivity control, battery status and signal status.
- Ergonomically designed synoptic shapes and shadings help the color-impaired people to distinguish different statuses.
- Quick-links to jump instantaneously to configuration application to make adjustment to the pre-configuration.

Print application

- Automatic printing of voting results

Installation/configuration notes

License
DCN-SW is license activated and comes which an authorization code which includes synoptic control with basic microphone control functionality. Activation is done via the license website.
The configuration application can be used independent of the additional licenses as where the operator application does need the license to control the conference system.
Running the operator application on a separate PC requires DCN-SWMPC.

Parts included

Quantity	Component
1	DVD includes:
	DCN-SW Conference Software Main module
	Authorization code including synoptic control
	Setup wizard that can selectively install all components (Server-, Configuration-, Operator- and Print- application) in all supported languages

Technical specifications

Maximum number of client PCs	20
Supported operating system	Windows 7 Home Premium (32 and 64 bits) or above or Windows Vista Home Premium(32 or 64 bits) or above All with the latest service packs and updates.
Required open TCP port for client PCs	9461
PC requirements	
Single CCU	Dual core processor (2.66 GHz) and 2 GBytes internal memory for single PC systems and for the server PC in multi PC systems. Dual core processor (2.66 GHz) and 1 GBytes internal memory for client PC's in multi PC systems.
Multi CCU	Quad core processor (2.40 GHz) and 2 GBytes internal memory for single PC systems and for the server PC in multi PC systems. Dual core processor (2.66 GHz) and 1 GBytes internal memory for client PC's in multi PC systems.

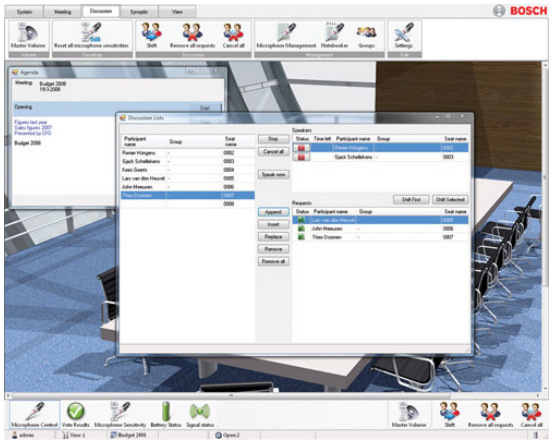
Ordering information

DCN-SW Conference Software Main Module
DCN Next Generation conference software main module, a platform for running all other conference software modules.
Order number **DCN-SW**

Software Options

DCN-SW-E Conference Software Main Module E-code
DCN Next Generation conference software main module, a platform for running all other Conference software modules, electronic authorization code.
Order number **DCN-SW-E**

DCN-SWMM Conference Software Microphone Management

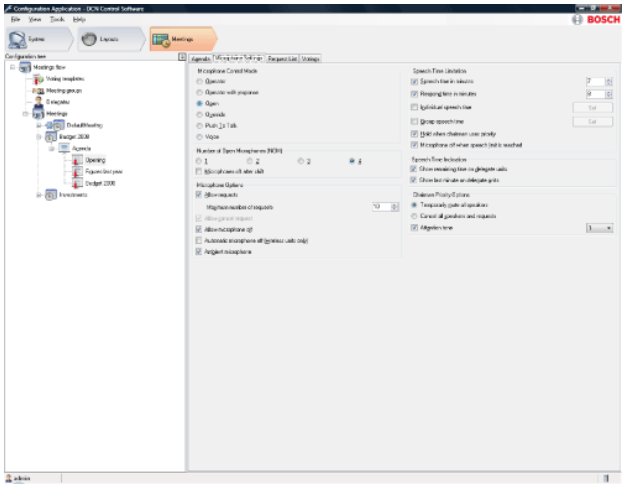


Features

- Prepare request-to-speak lists
- Group and individual speech timers
- Notebook

DCN-SWMM Conference Software Microphone Management is the way to efficient control microphones in a conference and provides the user a powerful and easy-to-use tool that covers all aspects of microphone management.

Functions



Function screenshot

Preperation
The operator prepares how the discussion will take place using the configuration application. Microphone settings can be defined for every entry in the meeting agenda. Settings available are: microphone mode, number of active microphones, request-to-speak list, individual and group speech timers and many more.

During the actual meeting the operator can choose to run the set-up as pre-configured, or make adjustments in real-time.

Microphone Management
Microphone Management offers a number of microphone control options. This has a bearing on both how the Microphone Management module operates and how the conference itself proceeds. These options are:

- Control by operator with request-to-speak list (manual).
- Control by operator with request-to-speak list and response list.
- Control by delegate with request-to-speak list (open).
- Control by delegate with override of other delegate microphones (first-in, first-out).
- Control by delegate with voice activation.
- Control by delegate with Push-To-Talk.

Each mode allows a different level of both operator and delegate microphone control, so all general conferences can be covered. For example, smaller, informal discussions require very little operator microphone control, so a mode such as microphone control by delegate would be ideal. For a full-scale international conference with hundreds of participants, control by operator with request-to-speak list would be more appropriate. The operator can specify whether one, two, three or four normal delegate microphones can be active simultaneously. It is also possible to specify whether delegates are allowed to cancel requests-to-speak or switch their microphones off. The amount of time delegates are allowed to speak can be defined for the current speaker, response speaker, individual delegates and for delegate groups.

Notebook
It is also possible to give delegates additional microphone activation privileges, which means they do not have to join the request list and can enjoy certain other privileges not granted to other delegates. The microphone type must be specified for the notebook. The possibilities are:

- ‘Chair’ for chairman microphones.
- ‘Button’ where delegates activate their microphones by pressing their microphone button (in this mode the ‘VIP’LED of the contribution units is illuminated).
- ‘Operator’ where the microphones of more active delegates are activated by the operator.
- ‘Voice’ where the microphones are voice activated.
- ‘PTT’ where microphones are activated by using Push-To-Talk.

Both DCN Next Generation and DCN Wireless systems automatically recognize an assigned chairman unit and will automatically add it to the notebook.

Parts included

Quantity	Component
1	Authorization code

Ordering information

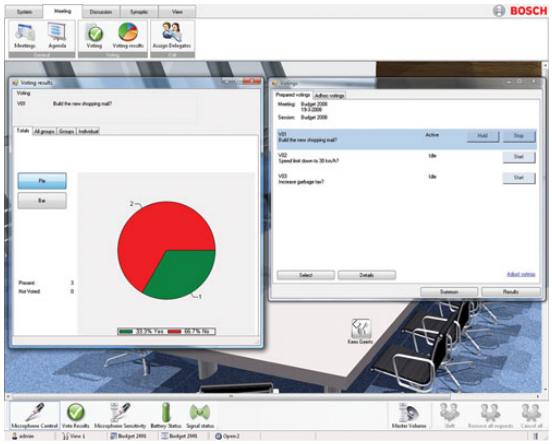
DCN-SWMM Conference Software Microphone Management
DCN Next Generation conference software microphone management for controlling speaker's lists, request and response lists, and speech time. To be used with DCN-SW.
Order number **DCN-SWMM**

Software Options

DCN-SWMM-E Conference Software Microphone Management E-code
DCN Next Generation conference software microphone management for controlling speaker's lists, request and response lists, and speech time. To be used with DCN-SW, electronic authorization code.
Order number **DCN-SWMM-E**

DCN-SWPV Conference Software Parliamentary Voting

2

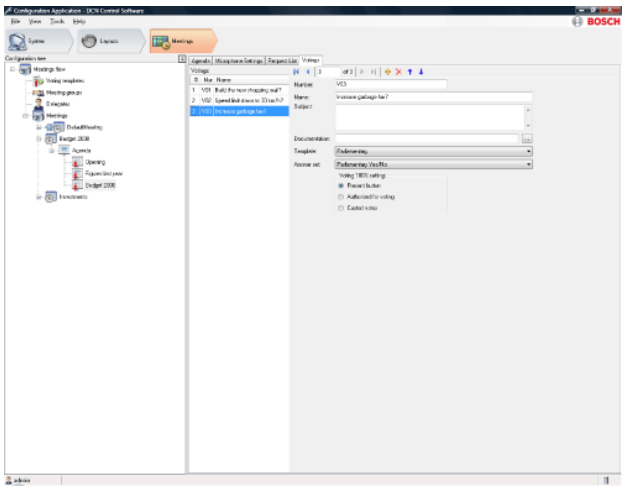


Features

- Complete operator control of parliamentary voting sessions
- Extensive motion preparation facilities
- Output voting results to printers
- Wide range of vote-related parameter options

The DCN-SWPV Conference Software Parliamentary Voting is a software module designed to control and to prepare parliamentary voting.

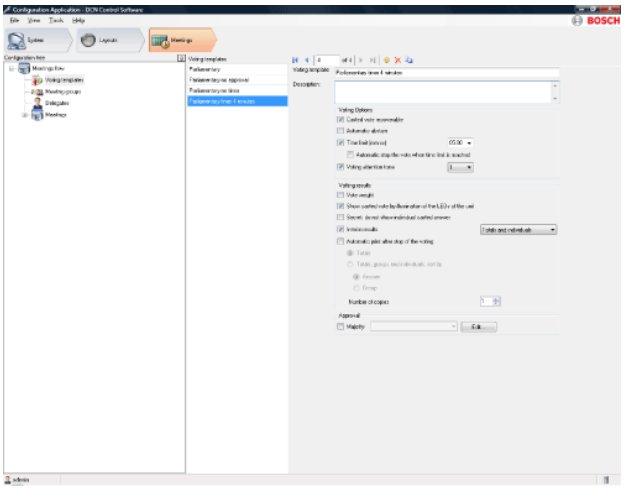
Functions



Vote preparation

Applications
The software covers a number of functions including vote preparation, specifying vote-related parameters, and starting and controlling voting.
In the configuration application voting is prepared as in the operator application the voting can be started and results can be shown.

Voting
Voting is an optional part of every agenda entry. Voting can consist of a number of proposals or motions, each of which will be voted on.
The preparation of the voting is done in two steps. First a template needs to be defined. The template contains more general settings like automatic print, secret, majority and many more. Secondly a single vote can be created. Now the number, name subject, template and answer set must be defined. Also a link to a document can be defined which can be activated from the operator application. This document can be used as extra information for a specific vote.



Voting template

Operator
The operator selects the desired vote from the prepared voting list and starts the vote; participants can use their units to register votes. The operator has full control over the voting procedure, and can stop or suspend a vote at any time. It is also possible to start a vote which is not prepared before (ad-hoc voting).

Display
The software program offers the possibility of displaying cast answers and the final result of a vote on the PCs screens. Optional delegate units with a display facility can display the vote results. There is also a facility of automatically print-out the vote results once the vote is completed.

Parts included

Quantity	Component
1	Authorization code

Ordering information

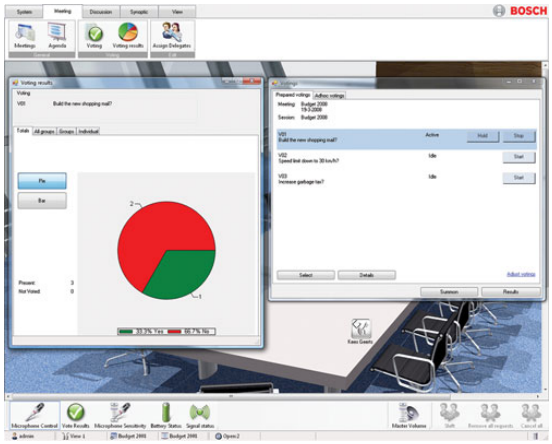
DCN-SWPV Conference Software Parliamentary Voting
DCN Next Generation conference software parliamentary voting for configuring and controlling voting. To be used with DCN-SW. DCN-SWDB is required for individual voting results.
Order number **DCN-SWPV**

Software Options

DCN-SWPV-E Conference Software Parliamentary Voting E-code
DCN Next Generation conference software parliamentary voting for configuring and controlling voting. To be used with DCN-SW. DCN-SWDB is required for individual voting results, electronic authorization code.
Order number **DCN-SWPV-E**

2

DCN-SWMV Conference Software Multi Voting

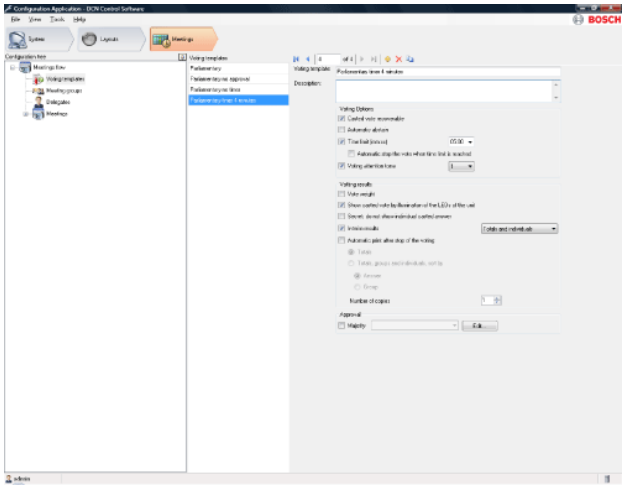


Features

- Complete operator control of parliamentary, opinion poll and audience response voting sessions
- Extensive motion preparation facilities
- Output voting results to printers
- Wide range of vote related parameter options

The DCN-SWMV Conference Software Multi Voting is a software module designed to control and to prepare parliamentary, opinion poll and audience response voting.

Functions



Vote preparation

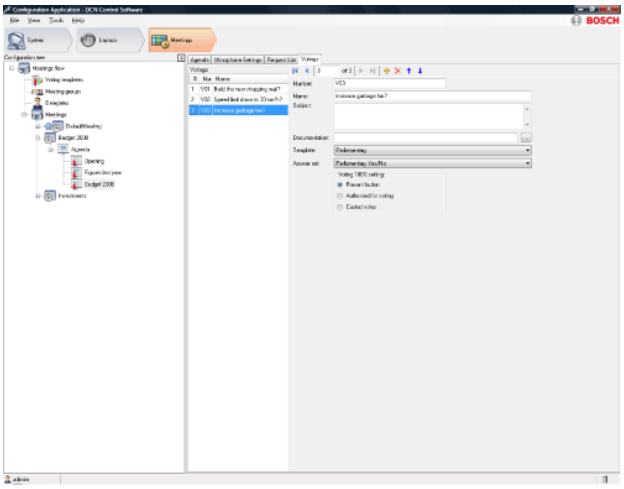
Applications
The software covers a number of functions including vote preparation, specifying vote-related parameters, and starting and controlling voting.
In the configuration application voting is prepared as in the operator application the voting can be started and results can be shown.

Voting
Voting is an optional part of every agenda entry. Voting can consist of a number of proposals or motions, each of which will be voted on.
The preparation of the voting is done in two steps. First a template needs to be defined. The template contains more general settings like automatic print, secret, majority and many more. Secondly a single vote can be created. Now the number, name subject, template and answer set must be defined. Also a link to a document can be defined which can be activated from the operator application. This document can be used as extra information for a specific vote.

Parliamentary voting
In a Parliamentary voting, participants vote about a motion. They can agree (Yes), disagree (No) or stay neutral (Abstain). They can also not vote at all (Not voted). A special type of parliamentary vote is with DNPV as a forth option. DNPV means that the delegate doesn't want to participate in the vote.

Audience Response voting
In an audience response voting, participants give their opinion about a statement. They use a rating system to indicate how much they agree with the statement. There are five possible answers: Very much against (--), Against (-), Neutral (0), For (+) and Very much for (++).

Opinion Poll
In an opinion poll, participants choose from a number of 5 answers: 1, 2, 3, 4 and 5.



Voting template

Operator
The operator selects the desired vote from the prepared voting list and starts the vote; participants can use their units to register votes. The operator has full control over the voting procedure, and can stop or suspend a vote at any time. It is also possible to start a vote which is not prepared before (ad-hoc voting).

Display
The software program offers the possibility of displaying cast answers and the final result of a vote on the PCs screens. Optional delegate units with a display facility can display the vote results. There is also a facility of automatically print-out the vote results once the vote is completed.

Parts included

Quantity	Component
1	Authorization code

Ordering information

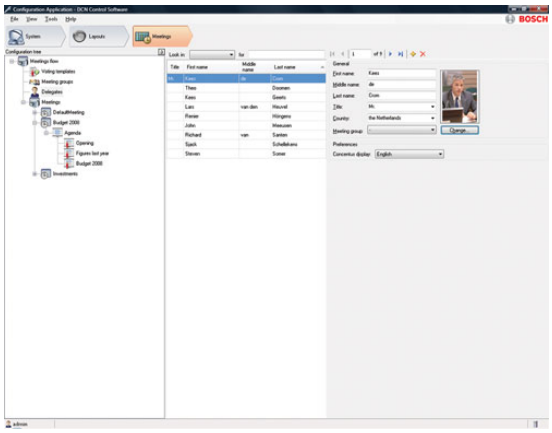
DCN-SW Conference Software Main Module
DCN Next Generation conference software main module, a platform for running all other conference software modules.
Order number **DCN-SW**

DCN-SW-E Conference Software Main Module E-code
DCN Next Generation conference software main module, a platform for running all other Conference software modules, electronic authorization code.
Order number **DCN-SW-E**

DCN-SWDB Conference Software Delegate Database
DCN Next Generation conference software delegate database. To be used with DCN-SW.
Order number **DCN-SWDB**

DCN-SWDB-E Conference Software Delegate Database E-code
DCN Next Generation conference software delegate database. To be used with DCN-SW, electronic authorization code.
Order number **DCN-SWDB-E**

DCN-SWDB Conference Software Delegate Database



Features

- Comprehensive database information for all delegates
- Re-use of delegate information across meetings
- Define vote and microphone authorization for each individual participant

The DCN-SWDB Conference Software Delegate Database allows users to compile a comprehensive database of information relating to delegates. During the meeting preparation stage the delegates can be assigned to the meeting as participants. The advantage of this method is that delegates participating in multiple meetings only need to be entered once and can be assigned to any desired meeting without re-entering the same delegate information again.

Functions

Database
All information is entered via the configuration application, before or during conference proceedings. A considerable amount of data can be specified for each conference participant. All delegate specific information like: delegate name, delegate country, delegate group and delegate unit display language, can be re-used and does not need to be re-entered for every meeting.
At meeting preparation it is possible to grant or deny authorization to individual delegates in a specific meeting for microphone, and voting use; also the voting weight can be defined.

Data Input
All delegate information is input via the configuration application. For some entries (first name, last name) the only restriction is the number of characters entered. For other entries (country, group, etcetera.), the input can easily be selected from a list of options that is presented by the system. This option list is automatically controlled by the system. When the user enters a text it is automatically added to the list.

User rights
By defining the correct user rights a delegate information entry PC client can be created. This entry client can be placed at the lobby of a conference hall entrance, where the registration officer can enter delegate information and assigning the delegate to the desired meeting.

Parts included

Quantity	Component
1	Authorization code

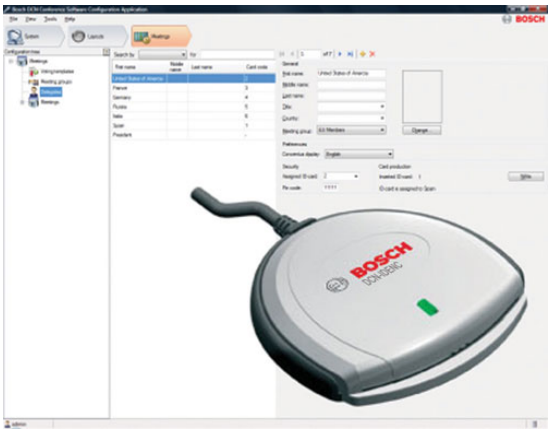
Ordering information

DCN-SWDB Conference Software Delegate Database
DCN Next Generation conference software delegate database. To be used with DCN-SW.
Order number **DCN-SWDB**

Software Options

DCN-SWDB-E Conference Software Delegate Database E-code
DCN Next Generation conference software delegate database. To be used with DCN-SW, electronic authorization code.
Order number **DCN-SWDB-E**

DCN-SWID Conference Software ID Card Encoding



The ID-card Encoding module is used for encoding ID-cards. ID-cards are used to identify delegates during a meeting. The ID-card Encoder (USB) (DCN-IDENC) and DCN-SW Conference Software Main module are required to produce ID-cards.

Ordering information

DCN-SWID Conference Software ID Card Encoding
DCN Next Generation conference software, ID-card encoding software for producing ID-cards. To be used with DCN-IDENC, DCN-SW, and DCN-SWDB.
Order number **DCN-SWID**

DCN-SWID-E Conference Software ID Card Encoding E-code
DCN Next Generation conference software, ID-card encoding software for producing ID-cards. To be used with DCN-IDENC, DCN-SW, and DCN-SWDB, electronic authorization code.
Order number **DCN-SWID-E**

DCN-IDENC ID Card Encoder (USB)
DCN Next Generation ID card encoder (USB) to be used with ID Card Encoder (DCN-SWID), and DCN-SW and DCN-SWDB software modules.
Order number **DCN-IDENC**

DCN-SW Conference Software Main Module
DCN Next Generation conference software main module, a platform for running all other conference software modules.
Order number **DCN-SW**

DCN-SW-E Conference Software Main Module E-code
DCN Next Generation conference software main module, a platform for running all other Conference software modules, electronic authorization code.
Order number **DCN-SW-E**

DCN-SWDB Conference Software Delegate Database
DCN Next Generation conference software delegate database. To be used with DCN-SW.
Order number **DCN-SWDB**

DCN-SWDB-E Conference Software Delegate Database E-code
DCN Next Generation conference software delegate database. To be used with DCN-SW, electronic authorization code.
Order number **DCN-SWDB-E**

DCN-IDENC ID Card Encoder (USB)

Features

- USB (2.0) supported
- ID card supported (DCN-IDCRD)
- Supported by DCN-SW and LBB 4190/00

The ID Card Encoder (USB) is used to encode ID cards (DCN-IDCRD). It is used in combination with the following Conference software modules: ID Card Encoder (DCN-SWID), Delegate Database (DCN-SWDB) and Conference Software Main module (DCN-SW).
The DCN-IDENC can also be used with the LBB 4181/00 from software version 2.80 onwards.

Certifications and approvals

FCC part 15 Class B, UL, CE, VCCI

EMV 2000 Level 1

Technical specifications

Electrical

Power supply	Through USB bus
Indication on top of unit	One dual state green LED
Operating System	XP, Server2003, Vista
ID card supported	DCN-IDCRD

Mechanical

Cable	1.5 m long with USB type A connector
Dimensions (H x W x D)	10 x 70 x 70 mm (0.39 x 2.8 x 2.8 in)
Weight	60 g (0.13 lb)

Environmental

Operating temperature	0 ° to +50 °C (+32 °F to +122 °F)
Storage temperature	-20 ° to +60 °C (-4 °F to +140 °F)
Relative humidity	15% to 90%

Ordering information

DCN-IDENC ID Card Encoder (USB)
DCN Next Generation ID card encoder (USB) to be used with ID Card Encoder (DCN-SWID), and DCN-SW and DCN-SWDB software modules.
Order number **DCN-IDENC**

DCN-SWID Conference Software ID Card Encoding
DCN Next Generation conference software, ID-card encoding software for producing ID-cards. To be used with DCN-IDENC, DCN-SW, and DCN-SWDB.
Order number **DCN-SWID**

DCN-SW Conference Software Main Module
DCN Next Generation conference software main module, a platform for running all other conference software modules.
Order number **DCN-SW**

DCN-SW-E Conference Software Main Module E-code
DCN Next Generation conference software main module, a platform for running all other Conference software modules, electronic authorization code.
Order number **DCN-SW-E**

DCN-SWDB Conference Software Delegate Database
DCN Next Generation conference software delegate database. To be used with DCN-SW.
Order number **DCN-SWDB**

DCN-SWDB-E Conference Software Delegate Database E-code
DCN Next Generation conference software delegate database. To be used with DCN-SW, electronic authorization code.
Order number **DCN-SWDB-E**

Accessories

DCN-IDCRD ID Card (100 pcs)
DCN Next Generation ID card, standard credit-card format (set of 100 pieces).
Order number **DCN-IDCRD**

DCN-IDCRD ID Card (100 pcs)

Features

- Attractive design
- Ample space for a name or other delegate personal information
- Clear instructions showing how to insert the card into a reader

These standard credit-card format ID cards are used by delegates to identify them to the DCN Next Generation system. This can be a pre-requisite for access to contribution units and activities such as attendance registration and voting.

Technical specifications

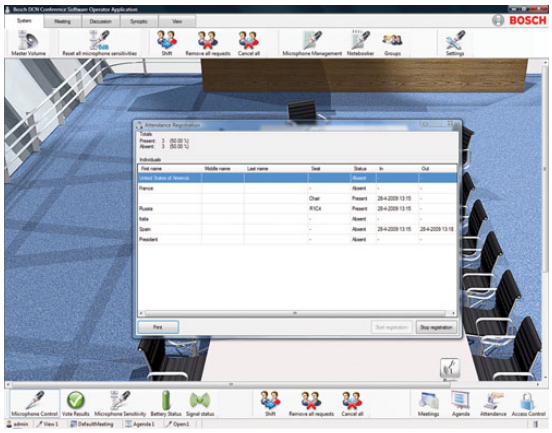
Mechanical

Dimensions (H x W)	85 x 54 mm (3.3 x 2.1 in)

Ordering information

DCN-IDCRD ID Card (100 pcs)
DCN Next Generation ID card, standard credit-card format (set of 100 pieces).
Order number **DCN-IDCRD**

DCN-SWAT Conference Software Attendance & Access



Features

- Attendance Registration using ID-card with or without PIN-code, or present button
- Access Control using ID-card with or without PIN-code or PIN-code only
- All data instantly available to operator
- Print function to reproduce data

The Attendance Registration & Access Control software module is used to register attendance of delegates in a conference meeting, and to control access to the conference facilities in the conference room.

Functions

The functionality of Attendance Registration & Access Control software falls into two categories:

Attendance Registration:
It is possible to specify entrance requirements that delegates have to meet before entering the meeting. This normally means delegates have to insert an ID-card in a card reader, either at the entrance to the meeting or at the conference unit. Registration at a conference unit can also be done by pressing the 'Present' button.
It is possible to display lists on-screen of all 'present' and 'absent' delegates, and print hard copies.

Access Control:
The settings specified for Attendance Registration can be used for access control. This means that although delegates can enter the meeting, they cannot use any of the conference unit's facilities (such as microphone and voting) without access requirements. Access is controlled by means of ID- cards, with or without PIN-code (free seating). There is an option whereby delegates register attendance at the entrance using an ID-card reader, and a specific conference unit is than made available for them (fixed seating).
Access control can be done on the conference unit only by ID-card with or without PIN-code or PIN-code only (fixed seating).

Ordering information

DCN-SWAT Conference Software Attendance & Access
DCN Next Generation conference software attendance registration and access control in the conference room. To be used with DCN-SW and DCN-SWDB software modules.
Order number **DCN-SWAT**

DCN-SWAT-E Conference Software Attendance & Access E-code
DCN Next Generation conference software attendance registration and access control in the conference room. To be used with DCN-SW and DCN-SWDB software modules, electronic authorization code.
Order number **DCN-SWAT-E**

DCN-SW Conference Software Main Module
DCN Next Generation conference software main module, a platform for running all other conference software modules.
Order number **DCN-SW**

DCN-SW-E Conference Software Main Module E-code
DCN Next Generation conference software main module, a platform for running all other Conference software modules, electronic authorization code.
Order number **DCN-SW-E**

DCN-SWDB Conference Software Delegate Database
DCN Next Generation conference software delegate database. To be used with DCN-SW.
Order number **DCN-SWDB**

DCN-SWDB-E Conference Software Delegate Database E-code
DCN Next Generation conference software delegate database. To be used with DCN-SW, electronic authorization code.
Order number **DCN-SWDB-E**

DCN-SWSMD Conference Software Streaming Meeting Data

Features

- XML streams for easy processing and logging
- Interface to video client applications to display meeting data by using video screens or video projectors
- Video client application available on DCN-SW DVD
- Example C-Sharp source code available on DCN-SW DVD
- Software developer manual available

Conference Software Streaming Meeting Data is an interface to provide meeting data such as current speakers, request lists, vote results and other information to video screens or video projectors.

System overview

Conference Software Streaming Meeting Data unlike other Conference Software modules does not require any user interaction of an operator; it consists of a software interface from the Conference Software Server to any number of client applications.
The interface consists of streams containing meeting data in XML format. Every time an activity (e.g. microphone on/ off, start/stop vote) takes place data is send over the XML stream.
The stream can be picked up by a video client application which is connected to a video screen or a video projector to display the meeting data.
The content of each stream can be freely defined so that each PC software Client receives only the required meeting data.
The streams are protected meaning that only authorized PC software clients can receive the streams.

Functions

A great diversity of activities can be streamed. The main items are:

- Start/Stop meeting, speakers list, request list, vote results both Individual and totals, participating delegates.
- Filters are available to define the content of a stream; e.g. if only voting activity is required in the stream all other information can be filtered out.
- Activities are queued before they are sent to the stream. The size of the queues are free definable.
- Client authorization is controlled by a list of allowed IP addresses. Clients with unknown IP addresses will not be able to receive the stream.
- Example C-Sharp source code and software developer manual available on DCN-SW DVD

Ordering information

DCN-SWSMD Conference Software Streaming Meeting Data
DCN Next Generation conference software streaming meeting data for providing data such as current speakers, request list, voting results and other information to video screens or video projectors. To be used with DCN-SW.
Order number **DCN-SWSMD**

DCN-SWSMD-E Conference Software Streaming Meeting Data E-code
DCN Next Generation conference software streaming meeting data for providing data such as current speakers, request list, voting results and other information to video screens or video projectors. To be used with DCN-SW. E-code.
Order number **DCN-SWSMD-E**

DCN-SW Conference Software Main Module
DCN Next Generation conference software main module, a platform for running all other conference software modules.
Order number **DCN-SW**

DCN-SWDB-E Conference Software Delegate Database E-code
DCN Next Generation conference software delegate database. To be used with DCN-SW, electronic authorization code.
Order number **DCN-SWDB-E**

DCN-SWMPC Conference Software Multi PC

Features

- Remote operator application

The DCN-SWMPC Conference Software Multi PC Module is needed when more than one PC is required to operate a meeting running on a DCN Next Generation or DCN Wireless system.

Functions

General
The DCN-SWMPC Conference Software Multi PC Module enables the use of multi operator applications running on multi PCs in a network.
Running configuration application on multi PCs does not require this module.

Parts included

Quantity	Component
1	Authorization code

Ordering information

DCN-SWMPC Conference Software Multi PC
DCN Next Generation conference software for connecting multiple clients. To be used with DCN-SW.
Order number **DCN-SWMPC**

Software Options

DCN-SWMPC-E Conference Software Multi PC E-code
DCN Next Generation conference software for connecting multiple clients. To be used with DCN-SW. Electronic authorization code.
Order number **DCN-SWMPC-E**

DCN-SWVAML Voice Activated Microphone Logging

Features

- Log microphone activity to third party applications during Voice mode
- Use automatic camera control in Voice mode
- Record speaker information in Voice mode
- See who speaks during Voice mode

DCN-SWVAML, Voice Activated Microphone Logging, enables the logging of who speaks while the DCN system is in voice mode. This enables automatic camera control using DCN-SWSACC, or recording speaker-names while the system is in voice-activated mode.

System overview

The DCN-SWVAML is an addition to the DCN-SW software and enables logging of microphone activity during Voice mode. Voice Activated Microphone Logging is developed for wired single CCU systems, based on the DCN-CCU(B)2, and for single delegate units. It is intended for applications where only one speaker is active at a time, for instance courtrooms.

Functions

The following functions are configurable:

- Microphone logging:
  - The logging can be enabled to start the monitoring of microphone activity during voice-mode.
  - The audio level, at which the microphone is regarded as being on, can be set via audio threshold.
  - The time the microphone stays on, after the audio level drops below the threshold, can be set via release time.
- Chairman priority:
  - The priority can be enabled to mute other microphones based on the audio on the chairman unit.
  - The priority chime can be enabled to automatically sound the priority chime when the chairman speaks.
  - The audio level, at which the chairman microphone is regarded as being on, can be set via audio threshold.
  - The time the chairman microphone stays on, after the audio level drops below the threshold, can be set via release time.

Ordering information

DCN-SWVAML Voice Activated Microphone Logging
DCN Next Generation conference software for voice-activated microphone logging, identifies which voice-activated microphone is active.
Order number **DCN-SWVAML**

DCN-SWVAML-E Voice Activated Microphone Logging E-code
DCN Next Generation conference software for voice-activated microphone logging, identifies which voice-activated microphone is active, electronic activation code.
Order number **DCN-SWVAML-E**

DCN-SW Conference Software Main Module
DCN Next Generation conference software main module, a platform for running all other conference software modules.
Order number **DCN-SW**

DCN-SW-E Conference Software Main Module E-code
DCN Next Generation conference software main module, a platform for running all other Conference software modules, electronic authorization code.
Order number **DCN-SW-E**

Smart Control Software

Smart Control Software

2

DCN-SWSMV Synoptic Microphone and Voting Software

Features

- Synoptic room overview for monitoring and controlling the microphones
- Voting control with individual results
- Real-time voting results displayed in Microsoft PowerPoint®
- On-screen help in many languages

The DCN-SWSMV Synoptic Microphone and Voting Software provides a range of conference facilities when used in combination with a DCN Wireless or DCN Next Generation system. The available functions include automatic seat assignment, synoptic microphone monitoring and control, and voting management.

Functions

Ease of use

Although it offers many powerful features, the software is extremely easy to use thanks to its innovative design. The application moves away from traditional control panels and buttons and replaces them with a highly intuitive graphic user interface. All functions are controlled from a single window making the software suitable for touch screen operation. The software features on-screen help in most major languages.

User interface

The user interface is based on a graphical representation of the conference venue. When a device is connected to the system it is automatically recognized and an icon is created for it on the on-screen room layout. The icons display information about device status and can be used by the operator to select individual devices for remote control functions. If a device becomes disconnected from the system, a red cross is displayed on top of its icon to alert the operator.

Operating modes

The Synoptic Microphone and Voting Software can operate in the following modes, depending on the required task:

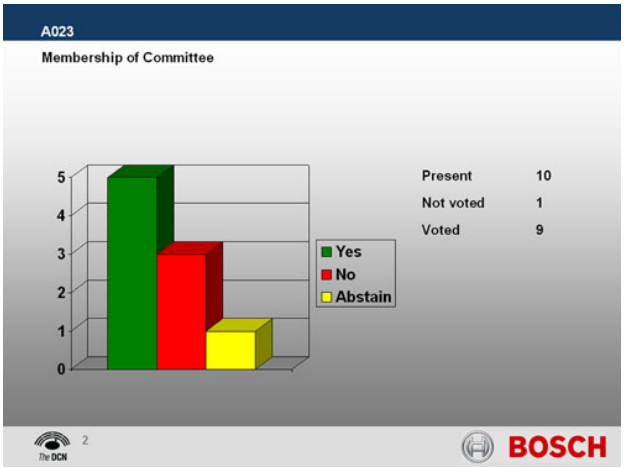
- Assignment mode allows you to assign names to microphone icons. The positions of the icons on the room layout can also be changed using the standard windows ‘drag & drop’.
- Microphone control mode allows you to observe and control the state of each individual microphone. Microphones can be switched on and off, or placed in the ‘request to speak’ queue.
- Battery and signal view mode shows the remaining battery charge time and the signal strength for each wireless discussion unit
- Voting result mode shows individual results in different colors according to votes cast

Notice

The different symbols in the various modes are specially designed so that they are also easily identified by persons with the visual disability of color blindness.

Parliamentary and real-time voting

The application provides parliamentary voting functionality. The system operator can summon delegates to vote, as well as starting and stopping voting sessions. Final vote results can be automatically printed or exported to a file; the software can also be configured to send real-time voting information to Microsoft PowerPoint® for display.



Real-time voting results in Microsoft PowerPoint®

Installation/configuration notes

Used in combination with a DCN Wireless or DCN Next Generation system.

Technical specifications

Supported operating system	Windows 7 Home Premium (32 and 64 bits) or above or Windows Vista Home Premium(32 or 64 bits) or above All with the latest service packs and updates.

Ordering information

DCN-SWSMV Synoptic Microphone and Voting Software
DCN Next Generation synoptic microphone and voting software. Includes automatic seat-assignment, synoptic microphone-monitoring and control, and voting management.
Order number **DCN-SWSMV**

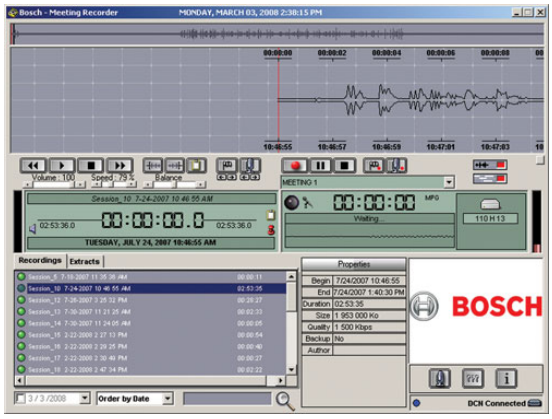
Software Options

DCN-SWSMV-E Synoptic Microphone and Voting Software E-code
DCN Next Generation synoptic microphone and voting software. Includes automatic seat-assignment, synoptic microphone-monitoring and control, and voting management, electronic authorization code.
Order number **DCN-SWSMV-E**

Meeting Recorder Software

Meeting Recorder Software.

DCN-MR Meeting Recorder



Features

- Recording in PCM/WAV, WMA or MP3 audio format
- Stereo track can be used for bilingual recording
- Ability to attach speaker names in the audio file
- Network sharing of audio files

The Meeting Recorder can be used in combination with CCS 900, DCN Next Generation or DCN Wireless systems.
The DCN-MR Meeting Recorder software is designed for recording and playback purposes during a meeting or conference.
Recording is done on the hard drive of a computer in PCM/WAV, WMA or MP3 format.

Functions

Recording
The Meeting Recorder can record two analog audio channels. In most cases one audio channel is sufficient to record the floor language. However, in some (bilingual) applications it is ideal to record two channels simultaneously.

Attach speaker names
The name of the current speaker can be attached in the audio file, during or after the meeting. This can be done manually or automatically. Manually by simply double clicking on the delegates name in list. Automatically when the DCN-MR is coupled with the DCN Central Control Unit[2]. For automatic attaching of the speaker names, the delegate names must be assigned to the corresponding microphone numbers. Additional conference information, such as the agenda or meeting minutes can also included in the audio file.
[2] Open interface LBB 4187/00 or streaming meeting data DCN-SWSMD additional required

Playback
Recorded files can be played back for listening or transcribing. While the audio file is played the name of the speaker (if available) and time-information can be displayed in a window of the text editor. In case two audio sources are recorded, they are recorded as one stereo file. When the balance slider is in the far left position (or right), only the left (or right) channel is heard during playback. When the balance slider is in middle position both audio channels are heard (stereo) making this product ideal for interpreter training applications.

Transcription
Although transcription is possible through the Meeting Recorder, the optional DCN Transcription Module (DCN-MRT) is especially suited for it. The DCN-MRT is in fact the same software as the DCN-MR but without the recording function.
For easy control during transcription; start, stop, fast-forward/rewind, an optional transcription foot pedal is available (DCN-MRFP).

Ease of use
Although it offers many powerful features, the software is easy to use. The intuitive graphic user interface is divided into recording, playback, visualization and files sections.

Installation/configuration notes

Installation
The DCN-MR Meeting Recorder software is supplied on DVD and can be installed on one or more computers. The software is designed to be used on a computer network. This gives the possibility, for example, to install a Meeting Recorder next to the DCN CCU, while storage of the files is done in parallel on a server via the computer network. Persons responsible for transcription can have access from their computer via the network to the files on the server.

Licence
Licensing of the Meeting Recorder is done with USB dongle. The Meeting Recorder software can be installed on more computers. As soon the USB dongle is plugged-in, the software is ready to use with the applicable licenses. This makes it very flexible, with a minimum of effort and cost.
For demonstration purposes, the DCN-MR software can be used to make or play recordings of five minutes maximum without the dongle.

Parts included

Quantity	Component
1	DCN-MR Meeting Recorder software on DVD
1	USB dongle (blue)
1	Audio connection cable

Technical specifications

Recording formats	(max. sample rate)
	WMA (128 kbps)
	PCM / WAV (48 kHz)
	MP3 (256 kbps)
System platform	Windows 7 Home Premium (32 and 64 bits) or above or Windows Vista Home Premium(32 or 64 bits) or above

Ordering information

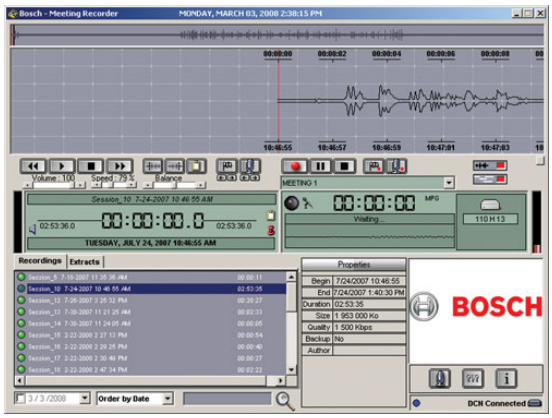
DCN-MR Meeting Recorder
DCN Next Generation meeting recorder application.
Order number **DCN-MR**

Accessories

DCN-MRT Transcription Module
DCN Next Generation meeting recorder transcription module. To be used with DCN-MR or CCS-CURD.
Order number **DCN-MRT**

DCN-MRFP Transcription Foot Pedal
DCN Next Generation meeting recorder transcription foot pedal. To be used with DCN-MR or DCN-MRT.
Order number **DCN-MRFP**

DCN-MRT Transcription Module



Features

- Transcription of Meeting Recorder and CCS 900 files
- Can play PCM/WAV, WMA or MP3 audio formats
- Network sharing of audio files
- Easy copying or extracting (parts) of audio files

The DCN-MRT Transcription Module software is designed for playback and transcription of Meeting Recorder or CCS 900 recordings.
The DCN-MRT can play PCM/WAV, WMA or MP3 formatted files.

Functions

Transcription
The DCN-MRT transcription module is especially suited for playback and transcription of Meeting Recorder or CCS 900[1] recordings. The DCN-MRT is in fact the same software as the DCN-MR but without the recording function.
For easy control during transcription; start, stop, fast-forward/rewind, an optional transcription foot pedal is available (DCN-MRFP).
[1] CCS 900 recordings from CCS-CURD

Playback
Recorded files can be played back for listening or transcribing. While the audio file is played the name of the speaker (if available) and time-information can be displayed in a window of the text editor. The DCN-MR Meeting Recorder can record two audio channels as stereo file. When the balance slider is in the far left position (or right), only the left (or right) channel is heard during playback. When the balance slider is in middle position both audio channels are heard (stereo) making this product ideal for interpreter training applications.

Extracting
Parts of recorded files can be easily extracted and optionally exported. In case the names of the speakers are available in the recording, easy retrieval of parts of a specific speaker are possible.

Ease of use
Although it offers many powerful features, the software is easy to use. The intuitive graphic user interface is divided into playback, visualization and files sections.

Installation/configuration notes

Installation
The DCN-MRT Transcription Module software is supplied on USB dongle and can be installed on one or more computers.
The software is designed to be used on a computer network. This gives the possibility, for example, to install a Transcription Module next to the DCN Central Control Unit, while storage of the files is done in parallel on a server via the computer network. Persons responsible for transcription can have access from their computer via the network to the files on the server.

Licence
Licensing of the Transcription Module is done with USB dongle. The Transcription Module software can be installed on more computers. As soon the USB dongle is plugged-in, the software is ready to use with the applicable licenses. This makes it very flexible, with a minimum of effort and cost.
For demonstration purposes, the DCN-MRT software can be used to play recordings of five minutes maximum without the dongle.

Parts included

Quantity	Component
1	DCN-MRT Transcription Module
1	USB dongle (yellow)

Technical specifications

System platform	Windows 7 Home Premium (32 and 64 bits) or above or Windows Vista Home Premium(32 or 64 bits) or above

Ordering information

DCN-MRT Transcription Module
DCN Next Generation meeting recorder transcription module. To be used with DCN-MR or CCS-CURD.
Order number **DCN-MRT**

Accessories

DCN-MRFP Transcription Foot Pedal
DCN Next Generation meeting recorder transcription foot pedal. To be used with DCN-MR or DCN-MRT.
Order number **DCN-MRFP**

DCN-MRFP Transcription Foot Pedal

Features

- Hands-free control
- User-programmable pedals
- Rugged and reliable construction
- USB connection
- Pedal pressing security

The DCN-MRFP Transcription Foot Pedal is used for easy control of start, stop, fast-forward and rewind during transcription of audio recordings.
The Transcription Foot Pedal is connected via the USB port of the computer and is configured for the DCN Meeting Recorder or DCN Transcription Module software (DCN-MR or DCN-MRT).

Functions

Controls
For easy control during transcription; start, stop, fast-forward/rewind; three foot pedals are provided which are configured in the Meeting Recorder or Transcription Module software. The pedals are mechanically secured against accidentally depressing more than one pedal.

Certifications and approvals

Region	Certification
Europe	CE

Installation/configuration notes

Connection
The DCN-MRFP Transcription Foot Pedal is connected via USB.

Parts included

Quantity	Component
1	DCN-MRFP Transcription Foot Pedal

Ordering information

DCN-MRFP Transcription Foot Pedal
DCN Next Generation meeting recorder transcription foot pedal. To be used with DCN-MR or DCN-MRT.
Order number **DCN-MRFP**

Various software applications

Various software applications.

DCN-SWIND Individual Channels

Features

- Easy routing of individual audio channels
- Up to 26 Individual Channels can be defined

The Individual Channels software is used to route individual delegate microphone audio signals to the DCN system audio channels. These individual audio channels can only be received by Audio Expanders or Cobranet Interfaces.

Functions

Individual Channels
A typical application for the Individual Channels software is to individually record a selected number of microphones in a courtroom environment (witness protection often needs unrecognizable audio).
The individual channels share the DCN audio channels with interpretation channels. A maximum of 26 individual channels can be used.

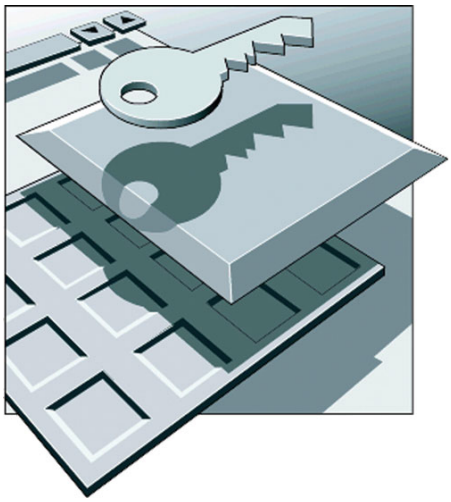
Route Individual Channels
When a delegate audio signal is assigned as an individual channel it is routed to a specific DCN audio channel and available on the output of an Audio Expander or Cobranet Interface. Optionally, it is then sent to an external audio processing device (e.g. distortion/vocoder) and returned to the audio input of the CCU, Audio Expander or Cobranet Interface. Delegate units which are used in Voice Activation mode, dual mode and all wireless units can not be assigned to an individual channel.

Recorder trigger
The digital output contact of the connected Audio Expander or Cobranet Interface becomes automatically active as soon as the presence of the individual channel signal has been recognized. The output contact is threshold configurable in the Audio Expander and Cobranet Interface.

Ordering information

DCN-SWIND Individual Channels
DCN Next Generation individual channels. Routes an individual delegate microphone audio signal to an audio channel of the DCN system. Cannot be used with the DCN Wireless Discussion units and DCN-DDI/DCN-DIS in dual mode.
Order number **DCN-SWIND**

LBB 4187/00 Open Interface



Features

- For custom build interfaces to control and to configure the system

The DCN Open Interface allows remote control of selected DCN functions via third party equipment and control software. Control data exchange between the DCN system and the remote control device or system is carried out via the Ethernet port on the CCU.

Ordering information

LBB 4187/00 Open Interface
DCN Next Generation open interface. Allows remote control of selected DCN functions via third party equipment and control software.
Order number **LBB4187/00**

Software Options

LBB 4187/00-E Open Interface E-code
DCN Next Generation open interface. Allows remote control of selected DCN functions via third party equipment and control software, electronic authorization code.
Order number **LBB4187/00-E**

HD Conference Dome

Features

- HD 1080p and 720p resolutions
- 160x zoom (10x optical, 16x digital)
- Industry standard HD-SDI output
- Control and configuration via Ethernet
- Screen line option for displaying delegate names up to 16 characters

The HD Conference Dome is an extremely compact and easy to install PTZ camera with an industry standard HD-SDI output for superb HD quality video.

The camera provides complete network-based control of all dome functionality including pan/tilt/zoom operation, presets as well as web-based configuration of all dome settings.

Notice

Use of Camera

The HD Conference Dome is designed for use in conferencing applications only.

HD Conference Dome highlights

With a dome diameter of only 5.04 inches (12.8 cm), the HD Conference Dome is nearly 50% smaller than the Bosch AutoDome. These compact dimensions make the HD Conference Dome ideal for conference environments.

Despite its compact design, the HD Conference Dome delivers state-of-the-art technology and features that are rare to most compact PTZ cameras. Its variable pan and tilt speeds and AutoPivot ensure optimal camera control and viewing at all zoom levels. The high-performance 160x (10x optical/16x digital) zoom autofocus camera incorporates the latest digital imaging technology with excellent sensitivity and resolution. With 64 user-defined presets the HD Conference Dome is not small on features.

The HD Conference Dome maximizes your conference investment by integrating with Bosch conference systems including the DCN Next Generation conference system, as well as the DCN Wireless discussion system.

The HD Conference Dome is simple to install and use; available with surface, wall, recessed, and pipe mount options.

System overview

High-performance 160x PTZ day/night camera

The HD Conference Dome PTZ camera has a 1/2.5-inch progressive scan CMOS sensor. With up to 1080p resolution and sensitivity to below 1.0 lux, the HD Conference Dome offers exceptional performance at a very affordable price.
Pan and tilt preset repeatability are accurate to within ±0.1 degrees to ensure that the correct scene is captured every time. The HD Conference Dome delivers variable pan/tilt speeds from a crawl speed of only 1 degree per second up to an ultra-quick 120 degrees per second. The dome is capable of pan speeds of 360 degrees per second and tilt speeds of 100 degrees per second between prepositions. The HD Conference Dome provides a tilt range of 0 to 94 degrees, and a pan range of up to 360 degrees continuous rotation.
The AutoScaling (proportional zoom) and AutoPivot (automatically rotates and flips the camera) features ensure optimal control.

Industry standard HD-SDI output

The HD Conference Dome makes use of an industry standard HD-SDI output for superb HD quality video. The HD Conference Dome supports 1080p30 and 720p60 resolutions for 50 Hz and 60 Hz models at 16:9 aspect ratio.

Multiple video streams

Next to the HD-SDI output, Bosch's innovative Quad-streaming feature enables the HD Conference Dome to deliver three H.264 streams together with an M-JPEG stream in full and reduced bandwidth modes for monitoring purposes.

Image stabilization

Image stabilization algorithms included with the HD Conference Dome reduces camera shake in both the vertical and horizontal axis, resulting in exceptional image clarity. Bosch’s unique image stabilization solution does not reduce camera sensitivity, unlike competitive systems.

Reliability

As with all Bosch products, the HD Conference Dome has been subjected to the industry’s most comprehensive and demanding battery of endurance tests such as HALT (highly accelerated life testing) to make sure it will hold up through years of use. And of course, it comes with Bosch’s industry-leading 3-year warranty.

2

Functions

The following are some of the features that make the HD Conference Dome the perfect fit for a variety of conference applications.

Network-based control and configuration
The HD Conference Dome enables full camera control and configuration capabilities over the network. Operators or technicians can control camera pan/tilt/zoom operation, and presets virtually anywhere without need for additional wiring.

The embedded web server lets the installer access all the user settings, make camera adjustments, and update firmware via a standard web browser or via the Bosch Video Management System.

Device management
Simple Network Management Protocol (SNMP) support facilitates the remote monitoring and management. The HD Conference Dome provides full support for SNMP v3.

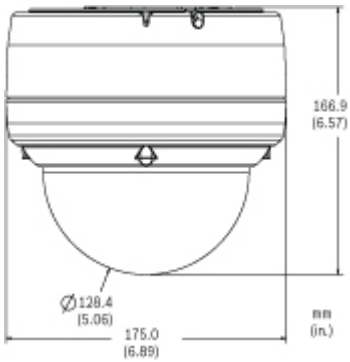
Ease of installation and servicing
The HD Conference Dome has been designed for quick and easy installation. The dome comes fully assembled and ready for surface mount applications. Also available are wall, recessed, and pipe mounting kits which allow the HD Conference Dome to be easily adapted for the individual site requirements.

Power over Ethernet
Power for indoor camera models may be supplied via a Power over Ethernet Plus (PoE+, IEEE 802.3at, class 4) compliant network cable connection. With this configuration, only a single cable connection is required to power and to control the camera while also monitoring images from the camera via the web server. An additional coax cable is required for the video from the HD-SDI output.

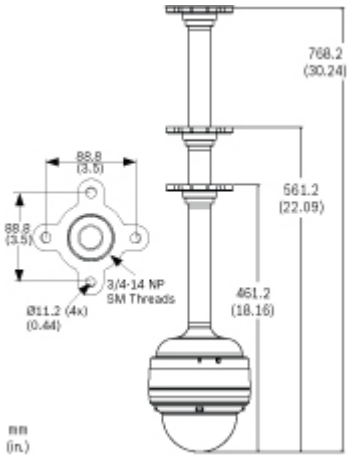
Certifications and approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

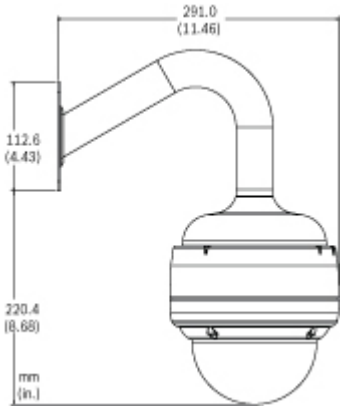
Installation/configuration notes

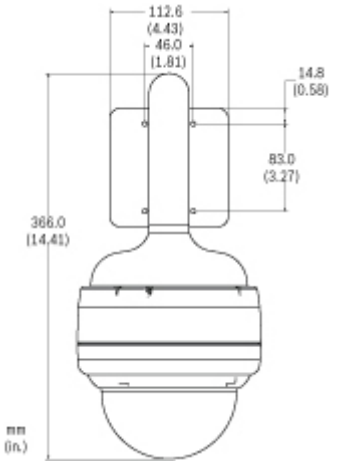


HD Conference Dome Dimensions

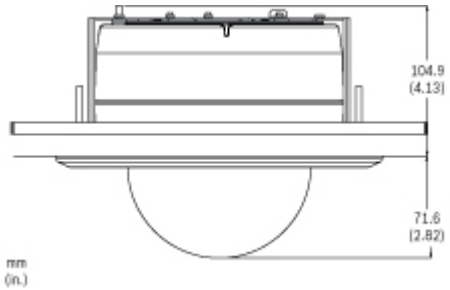


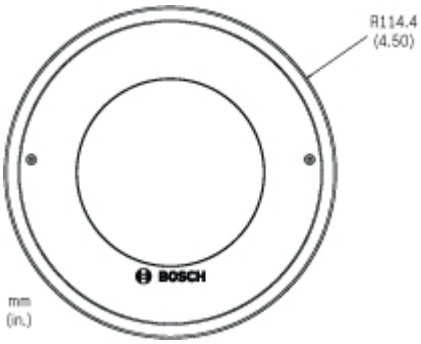
Pipe Mount Dimensions



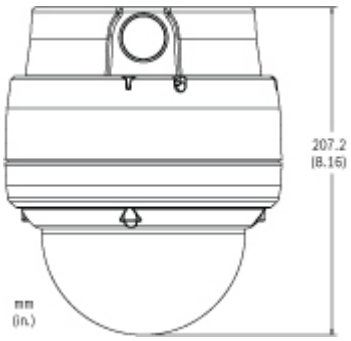


Wall Mount Dimensions





In-Ceiling / Recessed Mount Dimensions



Surface Mount Dimensions

Technical specifications

10x HD Camera

Imager	1/2.5 inch progressive scan CMOS	
Number of Pixels	2.1 Megapixels	
Aspect Ratio	16:9	
Lens	10x optical zoom (6.3 to 63 mm) (F1.8/F2.5 to close)	
Focus	Automatic with manual override	
Iris	Automatic with manual override	
Field of View	Horizontal: 5.5° to 50.6° Vertical: 3.1° to 29.3°	
Automatic Gain Control	Normal, Medium, High, Fixed	
Synchronization	Internal	
Aperture Correction	On/Off	
Digital Zoom	16x	
Sensitivity(typical)[1]	**30 IRE**[2]	**50 IRE**[2]
Day Mode		
SensUP Off	1.2 lx	2.0 lx
SensUP On (64x)	0.038 lx	0.063 lx
Night Mode		
SensUP Off	0.06 lx	0.1 lx
SensUP On (64x)	0.0018 lx	0.0031 lx
Electronic Shutter Speed (AES)	1x to 64x; 1/50 (1/60) to 1/10000	
Signal to Noise Ratio	> 50 dB (AGC off)	
Backlight Compensation	On/Off	
White Balance	ATW, Indoor, Outdoor, AWB Hold, Extended ATW, Manual (adjustable R and B signals in Manual mode)	
Day/Night	Monochrome, Color, Auto	

1. F1.8, 1/30 (1/25) shutter, maximum AGC.
2. Tinted bubble adds 0.8 f-stop loss.

Software Control

Camera Configuration	Via Internet Explorer Web browser version 7.0 or later or Bosch Configuration Manager
Software Update	Firmware upload

Video

HD-SDI	
Standards	SMPTE 292M
Resolutions (H x V) and Frame Rates	
• Full HD/1080p	1920 x 1080, 30 ips
• HD/720p	1280 x 720, 60 ips
Data Rate	1.5 Gbit/s
Video Delay	10 ms

Network Stream

Standards	H.264 (ISO/IEC 14496-10), M-JPEG, JPEG
Streaming	Individually configurable streams in H.264 and M-JPEG, configurable frame rate and bandwidth;
• 1080p30	One (1) H.264 1080p30 stream plus one (1) M-JPEG and one (1) I-frame stream
• 720p60	One (1) H.264 720p60 stream plus one (1) M-JPEG and one (1) I-frame stream
GOP Structure	IP, IBP, IBBP
Data Rate	9.6 kbps to 6 Mbps
Overall IP Delay	240 ms
Resolutions (H x V) and Frame Rates	
Stream 1	
• Full HD/1080p	1920 x 1080, 30 ips
• HD/720p	1280 x 720, 60 ips
Stream 2[3]	
• SD/480p (WVGA)[4]	854 x 480, 30 ips
• SD/240p (WQVGA)[4]	432 x 240, 30 ips

3. Stream 1 must be set to 720p at 30 ips.

4. Images displayed in 16:9 aspect ratio.

Network	
Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNTP, SNMP, RTSP, 802.1x, iSCSI, DynDNS, UPnP
NTCIP Protocols	
• CCTV Camera Control	NTCIP 1205
• Application Layer	SNMP per NTCIP 1101:1996 & NTCIP 2301
• Transport/Network Layers	TCP/IP per NTCIP 2202:2001
• Sub-network Layer	PMPP (Point to Multi-Point Protocol) per NTCIP 2101:2001 & NTCIP 2102:2003
Ethernet	10-Base T/100 Base-TX, auto-sensing, half/full duplex, RJ45
PoE+	IEEE 802.3at, class 4

Mechanical/Electrical

Pan Range	0–360° continuous
Tilt Angle	0–93.6°
Variable Speed	Pan: 1°/s to 120°/s Tilt: 1°/s to 100°/s
Pre-position Speed	Pan:360°/s Tilt: 100°/s
Preset Accuracy	± 0.1° typical
Rated Voltage	24 VAC ± 10%, 50/60 Hz or PoE+ (IEEE 802.3at, class 4)
Power Draw	17 W typical

Environmental

Operating Temperature	–10°C to 30°C (14°F to 86°F)
Storage Temperature	–20°C to 60°C (–4°F to 140°F)
Operating Humidity	0% to 90% relative, non-condensing

Miscellaneous

Pre-positions	64
Screen Line	Up to 16 characters (only standard ASCII character set can be used)
Supported Languages	English, German, Dutch, French, Italian, Spanish, Portuguese, Polish, Russian, Chinese, and Japanese

User Connections

Power	
• PoE+, Indoor Models	RJ-45 100 Base-TX Ethernet PoE+ IEEE 802.3at, class 4
• Camera, All Models	24 VAC, 50/60 Hz
Video	BNC with HD-SDI output
Control	RJ-45 100 Base-TX Ethernet

Construction

Size (Diameter x Height)	153.0 x 133.0 mm (6.02 x 4.61 in.)
Bubble Size	128.0 mm (5.04 in.)
Weight	1.92 kg (4.24 lb)
Material	
• Housing	Cast aluminum
• Bubble	Acrylic
Color	White (available in all regions) or Charcoal (available only in the Europe, Middle East, and Africa region)

Ordering information

VCD-811-IWT HD Conference Dome, White, with Tinted Bubble
White, 1080p HD indoor camera for use with video conference system, with tinted bubble
Order number **VCD-811-IWT**

VCD-811-ICT HD Conference Dome, Charcoal, with Tinted Bubble
Charcoal, 1080p HD indoor camera for use with video conference system, with tinted bubble (available only in the Europe, Middle East, and Africa region)
Order number **VCD-811-ICT**

Accessories

VJR-A3-IC AutoDome Junior HD Indoor Recessed Mount
Recessed mount for indoor camera applications that do not require IP54 or a plenum rating
Order number **VJR-A3-IC**

VJR-A3-SP In-ceiling Support Kit for AutoDome 700/800 Series and AutoDome Junior HD
Suspended ceiling support kit for AutoDome 700 and 800 Series and AutoDome Junior HD In-ceiling mounts
Order number **VJR-A3-SP**

VJR-A3-IC54 AutoDome Junior HD Plenum-rated and Outdoor Recessed Mount
Recessed mount required for indoor camera applications that must attain an IP54 or a plenum rating, and required for all recessed outdoor camera applications
Order number **VJR-A3-IC54**

VEZ-A2-JC Surface Mount Adapter
Charcoal adapter for AutoDome Junior surface installations
Order number **VEZ-A2-JC**

VEZ-A2-JW Surface Mount Adapter
White adapter for AutoDome Junior surface installations
Order number **VEZ-A2-JW**

VEZ-A2-PC AutoDome Junior Pipe Mount
Charcoal
Order number **VEZ-A2-PC**

VEZ-A2-PW AutoDome Junior Pipe Mount
White
Order number **VEZ-A2-PW**

VEZ-A2-WC AutoDome Junior Wall Mount
Charcoal
Order number **VEZ-A2-WC**

VEZ-A2-WW Wall Mount
White
Order number **VEZ-A2-WW**

VJR-SBUB2-CL AutoDome Junior HD Clear Bubble, Indoor
Order number **VJR-SBUB2-CL**

VJR-SBUB2-TI AutoDome Junior HD Tinted Bubble, Indoor
Order number **VJR-SBUB2-TI**

UPA-2450-60 Power Supply, 120 V, 60 Hz
Indoor power supply for camera. 120 VAC, 60 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-60**

UPA-2450-50 Power Supply, 220 V, 50 Hz
Indoor power supply for camera. 220 VAC, 50 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-50**

Cameras and Accessories

Cameras and Accessories
Transfer and exchange of information is a vital element in conferences, from small informal gatherings to international multi-lingual conferences with hundreds of delegates. Audio systems have traditionally been at the heart of conferences because a basic requirement of such gatherings is that all present can clearly hear what is being said, in a language they understand. But with increasing sophistication in conference management, it is possible to incorporate visual elements, thus adding an extra dimension to conference proceedings.

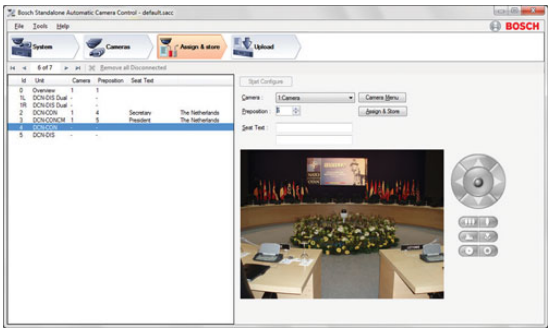
There is an extremely wide range of visual equipment suitable for use with the DCN system. This visual equipment, combined with the facilities offered by the Bosch DCN, provides each type of conference venue with the possibility to fulfill even the most demanding wishes of its customers. The DCN system combines excellent audio quality with a wide range of visual presentation possibilities. Many integral conference management functions, such as voting information and results, messages and microphone status, can be displayed in the conference venue. The type of display used, such as a video projector or LCD flat screen, depends on the number of people who have to access the information.

Video cameras are also widely used in many venues. They can show the delegates in a conference venue and allow both internal viewing and external distribution to broadcasting organizations. All these cameras have the flexibility to enable them to be used in venues ranging from small meeting rooms to parliaments and large commercial conference venues.

This section contains a summary of Bosch products suitable for use as video elements in a DCN system.
Bosch also supplies many more own-brand and third-party products for this purpose. For more information, please contact your local Bosch representative.

The DCN system can operate with a range of Allegiant Video Switchers. These units are used in combination with Allegiant Keyboards and the DCN Automatic Camera Control software to configure a camera switching system. This ensures that speaking delegates are always automatically displayed on flat screens or large displays. An outline is given below of the Allegiant Video Switchers available. The LTC 8200 is recommended for DCN. This allows up to 16 cameras to be connected, and has five video outputs. Information about other Allegiant Video Switchers and CCTV equipment can be found in the CCTV Data Book and relevant data sheets.

DCN-SWSACC Standalone Automatic Camera Control



Features

- On-screen Pan, Tilt and zoom control
- Supports Windows 7
- For use with DCN Next Generation and DCN Wireless Discussion Systems
- Print-out of configuration setting
- On-screen help facility

DCN-SWSACC Standalone Automatic Camera Control of the DCN Conference systems interfaces with the Bosch Allegiant or Autodome. It selects fixed or movable cameras to be activated to display the current active speaker at a conference.

Functions

When a chairman or delegate microphone is activated on the DCN Conference system equipment, the camera assigned to that position is activated. When none of the microphones are active, an overview camera is automatically selected. The image can be displayed on projectors or other screens together with information about the current speaker if required (such as delegate identification). The system operator has a dedicated screen, which also displays information about which camera is active. This system provides an extra dimension to conference proceedings.
The DCN-SWSACC software runs on a PC which is temporarily connected to configure the DCN Next Generation or DCN Wireless Discussion System and the Bosch Allegiant or Autodome.
With this PC the camera positions can be defined using the on-screen Pan, Tilt and Zoom control and stored as prepositions in the Autodome camera. At the same time a delegate position is linked to a camera preposition.
When all delegate positions are linked to camera prepositions the configuration needs to be uploaded to the DCN Conference system where it will be stored persistent in the CCU.
The configuration file can be printed and stored on the temporarily PC for later use. In case help or more information is needed the on-screen help can be activated from the software.

After configuration the PC is removed and Bosch Allegiant or Autodome is directly connected to the DCN Conference system.

Technical specifications

Electrical

Supported DCN systems	DCN Next Generation version 2.68 or higher
	DCN Wireless Discussion System version 2.68 or higher
Supported operating systems	Windows 7 Home Premium (32 and 64 bits) or above.
	Windows Vista Home Premium (32 and 64 bits) or above.
PC requirements	Dual core processor (2.66 GHz) and 2 Gb internal memory.
	At least one serial port (2 serial ports are preferred).
	In case a PC without serial ports is used one or two separate USB to serial port converters are needed.

Mechanical

Dimensions (H xW x D)	240 x 180 x 46 mm
Weight	0.375 kg

Ordering information

DCN-SWSACC Standalone Automatic Camera Control
DCN-SWSACC Standalone Automatic Camera Control. Interfaces DCN Conference systems with the Bosch Allegiant or Autodome.
Order number **DCN-SWSACC**

Information Displays

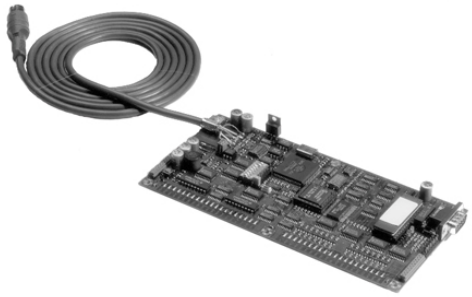
Information Displays
A flexible and versatile display system is important for distributing information in conference venues. Bosch information displays provide a quick and effective means of informing participants and audience of the status of events such as conference arrangements, room allocation, changes in the agenda, advertising spots, interpretation distribution, microphone status, voting information and results, and up-to-date news.
Within this range of information displays are products to match the requirements of almost any conference, from small-scale informal discussions to large-scale multi-lingual conferences.

Personal displays
The basic DCN Next Generation personal display system is housed in Concentus units and consists of a graphical LCD display for displaying text messages in almost every available font. They display information generated by DCN software modules as well as text to describe the contribution unit soft key functions. LCD technology has also been applied in the development of compact displays that can be built into tabletops or the backs of seats, providing an ideal solution for personal information presentation to selected delegates or groups of delegates or interpreters. These displays are an unobtrusive solution for displaying live or recorded video material, adding a valuable extra dimension to delegate information facilities connected to a separate cable system.

Video display using Streaming Meeting Data
Conference Software Streaming Meeting Data (DCN-SWSMD) (used together with a Video client application) is an interface to provide meeting data such as current speakers, request lists, vote results and other conference related information to video screens or video projectors.
Video projectors are ideal for large audiences or longer distance viewing. These systems allow high quality display of any live or recorded video material as well as computer generated graphics and text.
This way of displaying information is used in the majority of the conference systems. Please find more information about this solution in the Conference Software Suite chapter.

Hall displays
Next to the above described video display possibilities, the DCN system supports also numeric, alphanumeric and geographic hall displays.
Hall displays provide information (like voting results and other text and conference-related data) clearly and effectively to a large number of conference participants.
In this chapter you will find more information about the Data Distribution Board (DCN-DDB) which is needed to connect a hall display to the DCN system.

DCN-DDB Data Distribution Board



Features

- Drives hall displays
- Allows transparent data transport for remote control of external equipment
- Speak slowly and help indicator control

The DCN-DDB is a printed circuit board that is used with digital equipment such as hall displays, recorder systems and camera controllers to provide the data communication link to the DCN Next Generation. Transparent data transport between data communication boards in the DCN Next Generation system is possible, i.e. for remote control of slide projectors, lights, blinds, projection screens etc. It is intended for mounting in external equipment, and includes an RS232 communication port with a baud rate of 9600 or 1200 baud - selectable by an onboard dip switch. Opto-couplers isolate it from the DCN Next Generation system. It can be powered by DCN Next Generation system supply or an external power source. Other function is to control indicators to show speak slowly and help request from interpreters. When the interpreter presses the speak slowly or help button another output control of the DDB is activated, which can control an indicator of the chairman or operator's position.

Functions

Controls and Indicators
- Initialization button with LED indication

Interconnections
- 2 m (78.7 in) cable terminated with a molded six-pole circular connector
- Multi-pole PCB connector for:
  - External initialization button and LED
  - 8-bit parallel data input and output
- Nine-pole D-sub socket for RS232 output

Technical specifications

Electrical

External supply	7.5 – 35 VDC.

Mechanical

Dimensions (H x W)	100 x 200 mm (3.93 x 7.87 in)

Ordering information

DCN-DDB Data Distribution Board
DCN Next Generation data distribution board to provide the data communication link to a LED display.
Order number **DCN-DDB**

LBB 4114/00 DCN Trunk Splitter

The Trunk Splitter is used in conjunction with the system installation to divide the trunk-line cabling, thus allowing system installers to optimize layout of the trunk-line and contribution equipment to suit the conference venue.
The Trunk Splitter comes complete with cable restraining clamps and includes mounting holes for fixing to a floor or wall.

Functions

Interconnections

- 2 m (78.7 in) long cable terminated with a molded six-pole circular connector
- Six-pole circular connector for loop-through connections
- 2 x six-pole circular connector for trunk cable splitting and pulse regeneration purposes

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

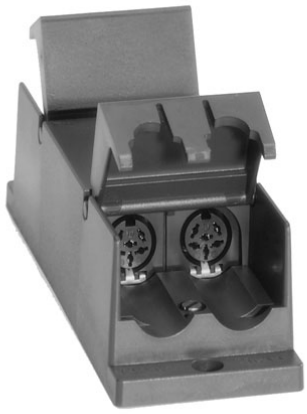
Mechanical

Mounting	Floor, cable duct or wall mounting
Dimensions (H x W x D)	35 x 49 x 140 mm (1.4 x 1.9 x 5.5 in)
Weight	0.3 kg (0.66 lb)
Color	Charcoal (PH 10736)

Ordering information

LBB 4114/00 DCN Trunk Splitter
DCN Next Generation trunk splitter, 2 m (6.6 feet) cable, charcoal.
Order number **LBB4114/00**

LBB 4115/00 DCN Tap-Off Unit



The Tap-Off Units create short-circuit proof tap-off points on the trunk line cabling. Each tap-off point allows for connection of up to five channel selector panels or one tabletop contribution unit such as Discussion unit, Concentus unit or Interpreter Desk. A Tap-Off Unit consists of two tap-off points. The Tap-Off Unit comes complete with cable restraining clamps and includes mounting holes for fixing purposes.

Functions

Interconnections

- 2 m (78.7 in) cable terminated with a molded six-pole circular connector
- Six-pole circular connector for loop-through connections
- 2 x six-pole circular connector for trunk cable splitting and pulse regeneration purposes
- Short-circuit proof tap-off points at the system cable

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Max power at Tap-offs	4.5 W each

Mechanical

Mounting	Floor, cable duct or wall mounting
Dimensions (H x W x D)	35 x 49 x 140 mm (1.4 x 1.9 x 5.5 in)
Weight	0.3 kg (0.66 lb)
Color	Charcoal (PH 10736)

Ordering information

LBB 4115/00 DCN Tap-Off Unit
DCN Next Generation tap-off unit, 2 m (6.6 feet) cable, charcoal.
Order number **LBB4115/00**

2

PRS-NSP Network Splitter

Features

- Two current-limited network tap-offs
- Supports redundant network connection on main loop
- Can feed power from an external supply to the network
- Indicators for power and fault status

The network splitter is used in a network to provide two branches from the main cable run. It can use an external DC power supply, or it can use the power supply from the network controller. The unit automatically switches to the local power supply unit when it is connected to it, reducing the power drain on the main network. The network splitter can also function as a repeater, effectively extending the length of the main network another 50 meters.

Functions

The splitter inserts Praesideo units connected to a tap-off into the main network, however without the redundancy of the main loop. The maximum current supplied for each of the two tap-offs is separately selectable. External power from the local supply is used only for the tap-offs, and is not fed into the main system cable. The network splitter has two LEDs for diagnostic purposes.

Controls and indicators

- Power status LED
- Fault status LED
- Jumpers to configure tap-offs power behavior

Interconnections

- Two system network connections for main network
- Two system network connection for network tap-offs
- External power supply input

Certifications and approvals

Safety	acc. to IEC 60065 / EN 60065
Immunity	acc. to EN 55103-2 / EN 50130-4 / EN 50121-4
Emissions	acc. to EN 55103-1 / FCC-47 part 15B
Emergency	acc. to EN 60849 / EN 54-16 / ISO 7240-16
Maritime	acc. to IEC 60945

Region	Certification
Europe	CE
	CE
	CE
	CE DOP
	CPD
	GL

Parts included

Quanti-ty	Component
1	PRS-NSP Network Splitter
1	Mounting bracket
1	Power supply connector

Technical specifications

Electrical

Power consumption	3.9 W (network)
External power supply	
Voltage	24 to 56 VDC, 48 VDC nominal
Current	2.5 A maximum (5 A peak <2 s)

Mechanical

Dimensions (H x W x D)	
Without bracket	27 x 243 x 80 mm (1.1 x 9.6 x 3.1 in)
With bracket	34 x 243 x 84 mm (1.3 x 9.6 x 3.3 in)
Weight	0.7 kg (1.5 lb)
Mounting	Bracket (two screws)
Color	Charcoal

Environmental

Operating temperature	-5 °C to +55 °C (+23 °F to +131 °F)
Storage temperature	-20 °C to +70 °C (-4 °F to +158 °F)
Relative humidity	15% to 90%
Air pressure	600 to 1100 hPa

Ordering information

PRS-NSP Network Splitter
Compact unit with mounting clamp, provides 2 protected tap-off network outputs on the main Praesideo network, powered from Praesideo network, can accept external power supply.
Order number **PRS-NSP**

PRS-FIN, PRS-FINNA and PRS-FINS Fiber Interfaces

Features

- Redundant network connection
- Indicators for power and fault status
- Two supervised control inputs (not PRS-FINNA)
- Can use a local power supply

Most of the Praesideo system units have plastic fiber optic interfaces. Plastic fiber is used to interconnect nodes which are less than 50 meters apart. For distances of more than 50 meters, glass fiber optic cable is used. A fiber interface converts from plastic to glass fiber, and vice versa. The fiber interfaces have a power supply input to provide power to remote network sections, and two control inputs. The control inputs can pass on supervision information about the power supply connected to the fiber interface.

Functions

These units interface glass fiber optical cable with plastic fiber optical cable, and support redundant wiring topology. In many applications this is necessary, because glass fiber can bridge much longer distances than plastic fiber. Any conversion to glass fiber must be converted back to plastic fiber before other Praesideo units can be attached, since they all have plastic fiber interfaces. This means that these units are always used in pairs.
Each interface can use an external 48 VDC power supply to provide power for itself, as well as for remote parts of the network. If there is no external power source, the interface uses power from the network controller. The PRS-FIN and PRS-FINS have two control inputs. These can be used to accept e.g. the fault output of the external power supply (UPS), allowing the units to monitor the power supply and report faults to the network controller. The fiber interfaces have two LEDs for diagnostic purposes.

The PRS-FINNA is the same as the PRS-FIN except that it has no network node address. This has the advantage that the unit does not occupy one of the 60 possible addresses in the network. It also has the disadvantage that without an address, it is not possible to access the status of the two control inputs, as it is with the PRS-FIN.

The PRS-FINS is the same as the PRS-FIN, except that it accepts single-mode glass optical fiber instead of multi-mode glass optical fiber. However, this does not increase the maximum permitted cable length of a Praesideo network.

Controls and indicators

- Power status LED
- Network status LED

Interconnections

- Network connection for plastic optical fiber
- Network connection for glass optical fiber
- External power supply input
- Two control inputs (not PRS-FINNA)

Certifications and approvals

Safety	acc. to IEC 60065 / EN 60065
Immunity	acc. to EN 55103-2 / EN 50130-4 / EN 50121-4
Emissions	acc. to EN 55103-1 / FCC-47 part 15B
Emergency	acc. to EN 60849 / EN 54-16 / ISO 7240-16
Maritime	acc. to IEC 60945

Region	Certification
Europe	CE
	CE
	CE
	CPD

Installation/configuration notes

The PRS-FINNA and the PRS-FIN are often used in combination. The PRS-FINNA is placed in the local (POF) network, and connected to a (remote) PRS-FIN, which can then provide remote monitoring.
The PRS-FINS is mostly used in installations where single-mode (mono-mode) glass fiber is already present. Otherwise multi-mode glass fiber is a cheaper alternative.

Parts included

Quantity	Component
1	PRS-FIN Fiber Interface or PRS-FINNA Fiber Interface Non-Addressable or PRS-FINS Fiber Interface Single Mode
1	Mounting bracket
1	Control input connector
1	Power supply connector

Technical specifications

Electrical

Power consumption	4.6 W (DC)
External power supply	
Voltage	24 to 56 VDC, 48 VDC nominal
Current	2.5 A maximum (5 A peak <2 s)
Control inputs	2 x
Connector	Screw terminals
Operation	Closing contact (with supervision)
Glass optical fiber interface	
Connector (PRS-FIN and PRS-FINNA)	SC (Avago AFBR-5803Z transceiver)
Connector (PRS-FINS)	SC (Avago AFCT-5805BZ transceiver)
Wavelength	1300 nm
Cable type (PRS-FIN and PRS-FINNA)	62.5/125 µm or 50/125 µm multi-mode
Cable type (PRS-FINS)	9/125 µm single-mode

Mechanical

Dimensions (H x W x D)	
Without bracket	27 x 243 x 80 mm (1.1 x 9.6 x 3.1 in)
With bracket	34 x 243 x 84 mm (1.3 x 9.6 x 3.3 in)
Weight	0.7 kg (1.5 lb)
Mounting	Bracket (2 screws)
Color	Charcoal

Environmental

Operating temperature	-5 ºC to +55 ºC (+23 ºF to +131 ºF)
Storage temperature	-20 ºC to +70 ºC (-4 ºF to +158 ºF)
Humidity	15% to 90%
Air pressure	600 to 1100 hPa

Ordering information

PRS-FIN Fiber Interface
Compact unit with mounting clamp, interface between Praesideo network and a multi-mode glass fiber interconnection to a second fiber interface, powered from Praesideo network.
Order number **PRS-FIN**

PRS-FINNA Fiber Interface Non-Addressable
Compact unit with mounting clamp, non-addressable interface between Praesideo network and a multi-mode glass fiber interconnection to a second fiber interface, powered from Praesideo network.
Order number **PRS-FINNA**

PRS-FINS Fiber Interface Single Mode
Compact unit with mounting clamp, interface between the Praesideo network and a single-mode glass fiber interconnection to a second fiber interface, powered from the Praesideo network.
Order number **PRS-FINS**

LBB 4116 Series DCN Extension Cables

Cable terminated at both ends with a molded six-pole circular connector (male and female). The extension to the type number gives the length of the cable.

Technical specifications

Mechanical

Dimensions (dia.)	6 mm (0.24 in)
Material	PVC
Color	Grey

Ordering information

LBB 4116/02 DCN Extension Cable 2m
DCN Next Generation extension cable, 2 m (6.6 feet), terminated with connectors.
Order number **LBB4116/02**

LBB 4116/05 DCN Extension Cable 5m
DCN Next Generation extension cable, 5 m (16.0 feet), terminated with connectors.
Order number **LBB4116/05**

LBB 4116/10 DCN Extension Cable 10m
DCN Next Generation extension cable, 10 m (33.0 feet), terminated with connectors.
Order number **LBB4116/10**

LBB 4116/15 DCN Extension Cable 15m
DCN Next Generation extension cable, 15 m (49.2 feet), terminated with connectors.
Order number **LBB4116/15**

LBB 4116/20 DCN Extension Cable 20m
DCN Next Generation extension cable, 20 m (66.0 feet), terminated with connectors.
Order number **LBB4116/20**

LBB 4116/25 DCN Extension Cable 25m
DCN Next Generation extension cable, 25 m (82.0 feet), terminated with connectors.
Order number **LBB4116/25**

LBB 4116/00 DCN Installation Cable 100m

The LBB 4116/00 is a 100 m (328 ft) roll of cable identical to DCN Extension cable assembly, but without the connectors.

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Mechanical

Dimensions (dia.)	6 mm (0.24 in)
Material	PVC
Color	Grey

Ordering information

LBB 4116/00 DCN Installation Cable 100m
DCN Next Generation installation cable, 100 m (328 feet), without connectors.
Order number **LBB4116/00**

LBB 4117/00 DCN Cable Locking Clamp (25 pcs)

Matching clamps for male/female cable connectors such as those on the DCN Extension Cable (LBB 4416). One clamp per male/ female connector required.

Ordering information

LBB 4117/00 DCN Cable Locking Clamp (25 pcs)
DCN Next Generation cable-locking clamp, set of 25 pieces.
Order number **LBB4117/00**

LBB 4118/00 DCN Termination Plug

The termination plug is specially designed for use with opened-ended DCN cabling.

Certifications and approvals

Region	Certification
Europe	CE

Ordering information

LBB 4118/00 DCN Termination Plug
DCN Next Generation termination plug to be used with opened-ended DCN cabling.
Order number **LBB4118/00**

LBB 4119/00 DCN Connectors (25 pairs)

The set DCN Connectors contains 25 female and 25 male connectors that can be used with the 100 m (328 ft) DCN Installation Cable LBB 4116/00.

Ordering information

LBB 4119/00 DCN Connectors (25 pairs)
DCN Next Generation connectors, set of 25 female and 25 male connectors.
Order number **LBB4119/00**

LBB 4416 Series Optical Network Cables

This is a special cable with 2 plastic fibers for data and audio communication and 2 copper cores for the power supply. The cable is supplied with the network connectors fitted. This cable can be used to connect the CCU to audio expanders.
The network cables are supplied in different lengths. The extension (/xx) on the type number indicates the length of the cable. Only the LBB 4416/00 is without connectors. The connectors are available separately (LBB 4417/00).

Certifications and approvals

Region	Certification
Europe	CE

Ordering information

LBB 4416/00 Network Cable 100m
Praesideo hybrid network cable, 100 m without connectors for custom length cables, to be used with LBB4417/00 network connectors.
Order number **LBB4416/00**

LBB 4417/00 Set Network Connectors (20 pcs)
Praesideo network connectors, to be used with LBB4416/00 network cable for 10 custom length cables (set of 20 pieces).
Order number **LBB4417/00**

LBB 4418/00 Cable Connector Tool Kit
Case with special tools for manufacturing custom-length network cables.
Order number **LBB4418/00**

LBB 4416/01 Network Cable Assembly 0.5m
Praesideo hybrid network cable, 0.5 m length with network connectors.
Order number **LBB4416/01**

LBB 4416/02 Network Cable Assembly 2m
Praesideo hybrid network cable, 2 m length with network connectors.
Order number **LBB4416/02**

LBB 4416/05 Network Cable Assembly 5m
Praesideo hybrid network cable, 5 m length with network connectors.
Order number **LBB4416/05**

LBB 4416/10 Network Cable Assembly 10m
Praesideo hybrid network cable, 10 m length with network connectors.
Order number **LBB4416/10**

LBB 4416/20 Network Cable Assembly 20m
Praesideo hybrid network cable, 20 m length with network connectors.
Order number **LBB4416/20**

LBB 4416/50 Network Cable Assembly 50m
Praesideo hybrid network cable, 50 m length with network connectors.
Order number **LBB4416/50**

LBB 4417/00 Set Network Connectors (20 pcs)

The set contains 20 connectors that can be used with the network cable LBB 4416/00 to make up to ten custom cables. The cable/connector toolkit LBB 4418/00 is required for assembly.

Certifications and approvals

Safety	acc. to IEC 60065 / EN 60065
Immunity	acc. to EN 55103-2 / EN 50130-4 / EN 50121-4
Emissions	acc. to EN 55103-1 / FCC-47 part 15B
Emergency	acc. to EN 60849 / EN 54-16 / ISO 7240-16
Maritime	acc. to IEC 60945

Region	Certification
Europe	GL
Poland	CNBOP

Ordering information

LBB 4417/00 Set Network Connectors (20 pcs)
Praesideo network connectors, to be used with LBB4416/00 network cable for 10 custom length cables (set of 20 pieces).
Order number **LBB4417/00**

Accessories

LBB 4416/00 Network Cable 100m
Praesideo hybrid network cable, 100 m without connectors for custom length cables, to be used with LBB4417/00 network connectors.
Order number **LBB4416/00**

LBB 4418/00 Cable Connector Tool Kit

Parts included

Quantity	Component
1	Standard cutting pliers
1	Stripping pliers
1	Crimping pliers
1	Plastic optical fiber cutting/stripping tool
1	Plastic optical fiber positioning and indent tool
1	Torx screw driver
1	Spare cutting system

Ordering information

LBB 4418/00 Cable Connector Tool Kit
Case with special tools for manufacturing custom-length network cables.
Order number **LBB4418/00**

Accessories

LBB 4418/50 Spare Cutting System (2 pcs)
Replacement cutting systems for LBB4418/00 (set of 2 pieces).
Order number **LBB4418/50**

LBB 4419/00 Cable Couplers (10 pcs)

Cable couplers are used to couple LBB 4416/xx network cable assemblies for extension.

Certifications and approvals

Safety	acc. to IEC 60065 / EN 60065
Immunity	acc. to EN 55103-2 / EN 50130-4 / EN 50121-4
Emissions	acc. to EN 55103-1 / FCC-47 part 15B
Emergency	acc. to EN 60849 / EN 54-16 / ISO 7240-16
Maritime	acc. to IEC 60945

Region	Certification
Europe	CE
	GL

Ordering information

LBB 4419/00 Cable Couplers (10 pcs)
Cable couplers, each coupler is used to connect 2 Praesideo network cables in series to increase the length to 30 m maximum (set of 10 pieces).
Order number **LBB4419/00**

Classic PC Software

Classic Software (LBB 4170 to LBB 4190)
The classic software is a range of software modules for wired DCN Next Generation systems using the DCN-CCU and DCN-NCO. Please note that the classic software is not compatible (and so will not work) with the new DCN-CCU(B)2 and also it will not work with DCN Wireless.

	Classic PC Software	Conference Software Suite	Smart Control Software
DCN-CCU	•	•	•
DCN-CCUB	•	•	•
DCN-WCCU			•
DCN-NCO	•	•	•
DCN-CCU2		•	•
DCN-CCUB2		•	•

Compatibility overview

Available languages
See the following table for available languages.

Chinese (simplified)
Chinese (traditional)
Czech
Dutch
English
Finnish
French
German
Italian
Japanese
Russian
Slovenian
Spanish
Swedish

Available languages overview

Activating software
The DCN software (both suite and classic) is protected with a license key. The license key depends on the CCU and the set of software modules. This means that an individual license key is required per CCU.

DCN-NCO Multi CCU Network Controller

Features

- Stylish and modern design (IF award)
- Connection of up to 30 Central Control Units
- Control of up to 1500 delegate positions
- 2 x 32 high quality audio channels
- PC control facility

The network controller forms the heart of a multi CCU system.
The network controller includes features for controlling delegate microphones, distributing simultaneous interpretation and conducting voting sessions, all without an operator.
In combination with a PC, this control unit brings greater sophistication to conference control. Users can access an extensive range of software modules, each with a specific function in controlling and monitoring a conference. These modules greatly expand the capacity to manage a conference. In the event of PC failure, this control unit will revert to its stand-alone operation mode, enabling the conference to proceed.

Functions

- Basic microphone management facilities
- Four operational microphone modes:
  - Open: microphone button control with request-to-speak (Auto)
  - Override: microphone button with override of activated microphones (FIFO)
  - Voice: voice activated microphones
  - Push-to-talk: push and hold button to speak
- Number of open microphones between 1 and 4
- Basic voting control for parliamentary voting procedure
- Delegates can register ‘Present’, ‘Yes’, ‘No’ and ‘Abstain’. The Concentus Chairman unit can start, stop and suspend the voting. The total results can be displayed on hall displays and on the LCD screens of the units
- A page function which activates a voting tone. With this tone the chairman can indicate that a voting round is about to start
- Basic simultaneous interpretation function with as many as 31 language channels plus one floor channel
- Basic intercom function with function to assign intercom operator and intercom chairman (both can be called from the interpreter desk)
- Stand-alone automatic camera control
- Extended conference facilities when using control PC software or remote controllers
- Adjustable sensitivity for the audio inputs
- Adjustable level for the audio outputs
- Audio insertion facility to connect external audio processing devices or telephone couplers
- Configuration of network controller and system via a display and a single rotary push button
- The network controller can be assigned a unique name by the installer for easy identification
- VU meter readings to monitor audio inputs and audio outputs. The audio can be monitored using a headphone
- Loudspeaker and headphone connection for audio monitoring.
- 19”(2U) housing for tabletop or rack mounting
- Handgrips for easy transportation

Controls and Indicators

Front
- 2 x 16 Character LCD display for status information and configuration
- Rotary control to navigate through the LCD menus

Back
- Power on/off switch

Interconnections

- Euro power socket with built-in fuse
- Two optical network connections for connection of Central Control Units, Integrus transmitters or various audio expanders
- Two three-pole XLR balanced audio line inputs with galvanic separation
- Two three-pole XLR balanced audio line inputs without galvanic separation
- Four stereo Cinch unbalanced audio line inputs
- Two three-pole XLR balanced audio line outputs with galvanic separation
- Two three-pole XLR balanced audio line outputs without galvanic separation
- Four stereo Cinch unbalanced audio line outputs
- One stereo headphone output 3.5 mm (0.14 in)
- Eight control inputs
- Five control outputs
- One RS-232 serial data connectors for controlling cameras and diagnostics
- One Ethernet connection for PC control

Parts included

Quantity	Component
1	DCN-NCO Multi CCU Network Controller
1	Set of mounting brackets for 19” rack
1	Set of feet
1	Set of connectors
1	System installation and user instruction on CD ROM
1	Power cord

Technical specifications

Electrical

Supply voltage	115/230 V +/- 10 %
Power consumption	170 W
Optical network supply	40 VDC, max 65 W
Total supply power	130 W
RS-232 connection	1 x nine-pole Sub-D female socket
Ethernet connection	1 x RJ45 socket
Frequency response	30 Hz - 20 kHz (-3 dB at nominal level)
THD at nominal level	< 0.5 %
Cross talk attenuation	> 85 dB at 1 kHz
Dynamic range	> 90 dB
Signal-to-noise ratio	> 87 dBA

Audio inputs

XLR nominal input	-12 dBV (+/- 6 dB)
XLR maximum input	+12 dBV
Cinch nominal input	-24 dBV (+/- 6 dB)
Cinch maximum input	+0 dBV

Audio outputs

XLR nominal output	-12 dBV (+6 / -24 dB)
XLR maximum output	+12 dBV
Cinch nominal output	-24 dBV (+6 / -24 dB)
Cinch maximum output	+0 dBV

Mechanical

Mounting	Tabletop or mounted in a 19” rack
Dimensions (H x W x D)	
for tabletop use, with feet	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19” rack use, with brackets	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	7 kg (15.4 lbs)
Color	Charcoal (PH 10736) with silver

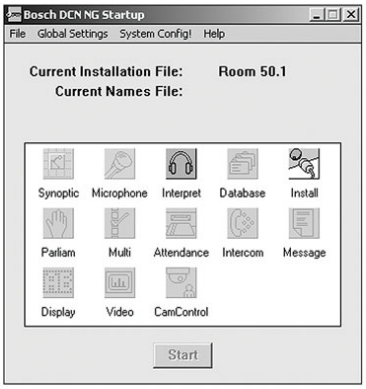
Ordering information

DCN-NCO Multi CCU Network Controller
Multi CCU network controller for controlling delegate microphones, distributing simultaneous interpretation, and conducting voting sessions.
Order number **DCN-NCO**

DCN-NCO-US Multi CCU Network Controller (US)
Multi CCU network controller for controlling delegate microphones, distributing simultaneous interpretation, and conducting voting sessions. US version.
Order number **DCN-NCO-US**

2

LBB 4190/00 Startup



Features

- Setting master volume levels
- Opening, closing and deleting Installation File
- Configuring the Startup program to automatically load selected DCN Next Generation modules
- Accessing, acknowledging and printing error messages
- On-screen help facility

The Startup screen is active whenever DCN Next Generation software modules are used for controlling and monitoring. This module is different from other DCN Next Generation software modules as it is primarily used as a platform from which the other modules are selected. However, this is only one aspect of the different functions of Startup.

Functions

When Startup is loaded, it presents the user with a desktop window that is the DCN Next Generation opening screen. The other DCN Next Generation modules are represented by icons in this opening screen, and activated simply by clicking on them. Startup also has a facility, which allows other DCN Next Generation modules to be loaded automatically. This saves having to manually select modules that are used virtually every time the DCN Next Generation system is in operation. The user can specify any combination of modules for automatic Startup.

Installation/configuration notes

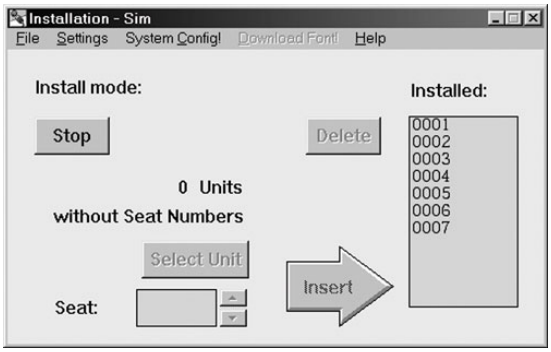
This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Active whenever DCN Next Generation software modules are used.

Ordering information

LBB 4190/00 Startup
DCN Next Generation classic PC startup software. A platform for selecting the other software modules.
Order number **LBB4190/00**

LBB 4185/00 System Installation



Features

- Single-point control of system installation
- Facilities for assigning functions to audio channels
- In-conference warning message when installation configuration changes
- On-screen help facility

The System Installation software is an effective tool for installers and system operators when installing and setting up the DCN Next Generation system. System installation, set-up and functions are brought entirely under PC control through its easy-to-use, Windows-based software.

Functions

The DCN Next Generation System Installation software provides – in an easy yet methodical way – to specify the number of audio channels dedicated to interpretation and intercom facilities.

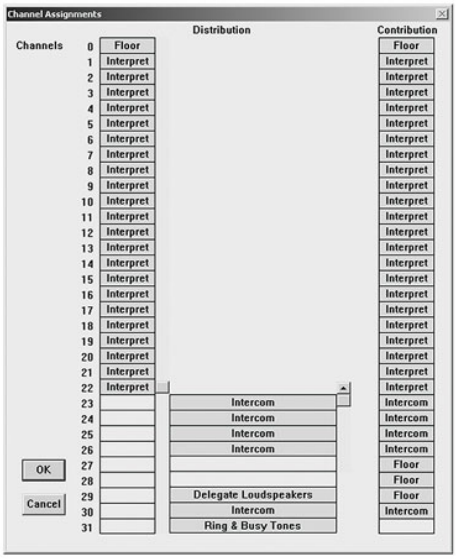
Assigning seat numbers
The initial task in any installation is to assign seat numbers to delegate contribution units. The System Installation software offers a choice of two assignment methods:

1. From the hall, by physically pressing delegate microphone buttons in sequence. This is registered by the PC, which in turn automatically allocates the unit a number.
2. From the PC, where the operator selects a random microphone and allocates a number. The next assigned number will follow on sequentially. The software instantly recognizes when a new unit is installed by offering a seat number for the newly installed unit.

A dialogue box displaying the system configuration is available at any time, with the total number of installed delegate and chairman units, interpreter desks etc.

Downloading font sets
It is possible to download special font sets that allow certain DCN Next Generation contribution units to display characters in complex European languages, or icon-based scripts such as Chinese.

Audio channel assignment
The DCN Next Generation system offers 32 audio output channels, with a default configuration of 26 distribution, 4 contribution and 1 intercom link (requires 2 channels) channels. Ten distribution channels can be assigned to combinations of interpretations, floor language and intercom, with two channels reserved for line output and one for delegate loudspeakers as default. If required, all 31 channels can also be used for interpretations. All channel assignments are interdependent. The number of channels assigned to floor and intercom is dependent on the number required for simultaneous interpretation. In large international conferences using 31 interpretation channels plus one floor channel, no channels are available for intercom use. In such a case, the system performs totally as an interpretation system. The task of assigning audio channels is made easy with the aid of on-screen channel selection, using a display with three scroll bars that gives an instant overview of channel allocation and the effect of altering any of these. System Installation is primarily a preparation program. Once all microphones and delegate units have been assigned seat numbers and the audio channels configured and tested, there is no need to use System Installation for day-to-day monitoring and controlling of a conference. However, if the physical layout changes in the conference hall (delegate units are added, for example), the data in System Installation must be updated, and a message appears in the installation window.
The conference-related information generated is stored in an installation file. The user can open, create, save, delete and save these files under a new name.



Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

System installation, set-up and functions are entirely under PC control.

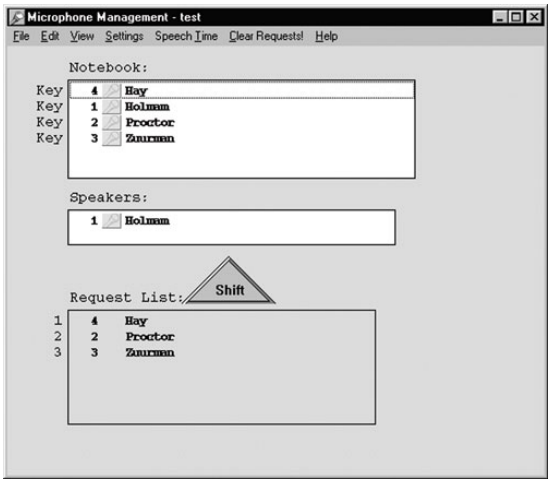
Ordering information

LBB 4185/00 System Installation
DCN Next Generation classic PC system installation software. Effective tool for installers and system operators when installing and setting up the DCN Next Generation system.
Order number **LBB4185/00**

Software Options

LBB 4185/00-E System Installation E-code
DCN Next Generation classic PC system installation software. Effective tool for installers and system operators when installing and setting up the DCN Next Generation system. Electronic authorization code.
Order number **LBB4185/00-E**

LBB 4170/00 Microphone Management



Features

- Single-point control of all microphone units
- Various microphone control options
- Extensive range of options for microphone related parameters
- Output to printer and/or external equipment such as cameras
- On-screen help facility

The efficient management of delegate microphone status is a vital element in successful conference control. The Microphone Management software module provides the user with a powerful and easy-to-use tool that brings all aspects of microphone management to a single point of control.

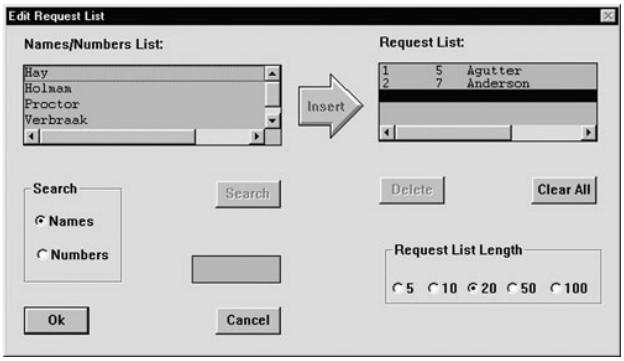
Functions

Microphones are controlled using the name (or desk number) of the delegate. The user can select microphones for the speakers list (active microphones) or prepare a request list. The order of delegates within the request list and speakers list can be altered at any time before or during a conference. A search facility is available that allows the operator to locate specific delegates. It is also possible to give notebook status to delegates, which means they do not have to join the request list and can enjoy certain other privileges not granted to other delegates. The microphone type must be specified for the notebook. The possibilities are:

- 'Chair' for chairman microphones
- 'Key' where delegates activate their microphones by pressing their microphone buttons. (in this mode the 'VIP'LED of the contribution units is illuminated)
- 'Operator' where the microphones of more active delegates are activated by the operator

The DCN Next Generation system automatically recognizes an assigned chairman unit and will automatically add it to the notebook. Microphone Management offers a number of microphone control options. This has a bearing on both how the Microphone Management module operates and how the conference itself proceeds. These options are:

- Control by operator with request-to-speak list (manual)
- Control by operator with request-to-speak list and response list
- Control by delegate with request-to-speak list (open)
- Control by delegate with override of other delegate microphones (first-in-first-out)
- Control by delegate with voice activation



Each mode allows a different level of both operator and delegate control, so almost all situations can be covered. For example, smaller, informal discussions require very little operator control, so a mode such as control by delegate would be ideal. For a full-scale international conference with hundreds of participants, control by operator with request-to-speak list would be more appropriate. The operator can specify whether one, two, three or four normal delegate microphones can be active simultaneously. It is also possible to specify whether delegates are allowed to cancel requests to speak or switch their microphones off. The amount of time delegates are allowed to speak can also be specified.

A number of options are available as to how the conference information is presented. The contents of the main window can be altered, and how each delegate is represented in any of the lists is also user-definable. There is a facility to automatically test and scan all installed microphones individually, with or without a sound generator. The microphone under test is indicated on-screen and the results of the test are made known to the system operator. This program can also be used in combination with the Text/ Status Display module, LBB 4183/00, to show delegate names or seat numbers on a hall display as soon as they are present on the speakers list or request-to-speak list. Delegates' microphone activity can be recorded on file or sent to a printer. Microphone activity data is also made available for controlling external equipment such as an automatic camera system.
During a conference, the main window is used for monitoring and controlling delegate microphone status. Depending on the operating mode, delegate microphones can be switched on or off by simply clicking on the screen microphone icon, or double-clicking on a delegates name. A single click on a delegate name allows the operator to either insert, delete or replace the delegate from the request-to speak list.

Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Single-point control. Can be used in combination with the Text/ Status Display module, LBB 4183/00.

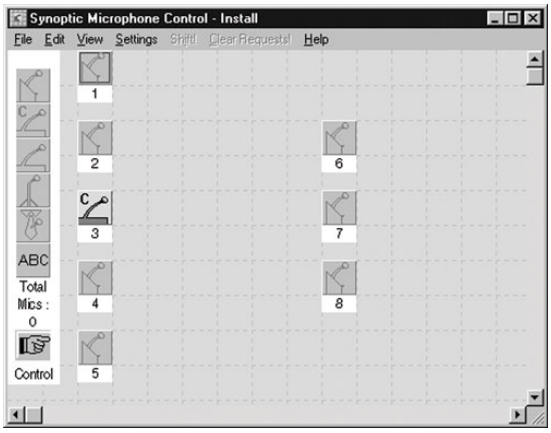
Ordering information

LBB 4170/00 Microphone Management
DCN Next Generation classic PC microphone management software, allows all aspects of microphone management to be controlled from a single point.
Order number **LBB4170/00**

Software Options

LBB 4170/00-E Microphone Management E-code
DCN Next Generation classic PC microphone management software, allows all aspects of microphone management to be controlled from a single point, electronic authorization code.
Order number **LBB4170/00-E**

LBB 4171/00 Synoptic Microphone Control



Features

- Easily-created synoptic layout used for microphone control
- Single-point control of all microphone units
- Various microphone control options
- Output to printer and/or external equipment such as cameras
- On-screen help facility

This software module takes microphone control away from the traditional method of control panels and keys and replaces it with an extremely user-friendly, on-screen means of managing microphone status. A graphical representation of the contribution units in a conference venue is created and then used to control the microphone status of delegates. Through the use of different icons and colors, the user has an at-a-glance overview of the status of all conference participants. The result is a highly visual 'push-button' conference control facility. There are two modes of operation within Synoptic Microphone Control; layout mode and control mode.

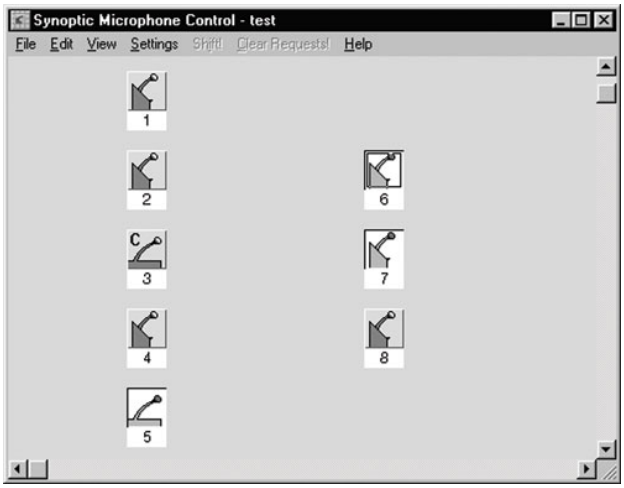
Functions

Layout mode
In layout mode, the user creates a graphical representation of the contribution units present in the conference venue. This synoptic layout is a plan view of the conference venue. Layout mode contains dedicated tools for this purpose. Icons representing the contribution equipment are used to build up the layout. Each item of contribution equipment (delegate unit, chairman unit, podium or lavaliere microphone, etc.) has its own icon. Viewing options that reduce the size of the icons make it easier to work with larger layouts. An optional on-screen grid helps with alignment and a snap facility lines up icons with the grid lines. Seat numbers can be automatically assigned to each layout element. The synoptic layout can be changed simply and quickly. Contribution units can be moved by dragging them using the cursor.

Standard Windows functions such as cutting and pasting can be used to move, remove or add elements to the layout.

Control mode
While layout mode is used to create a synoptic floor plan of the conference venue (for preparation purposes), control mode is used to monitor and control a conference. The synoptic layout generated in layout mode becomes a control panel in control mode. The icons in the layout become functional, and are used as status indicators or buttons to initiate actions for the contribution unit the icon represents. The color of a particular icon is related to the state (request-to-speak, active, etc.) of the actual microphone it represents. Icons cannot be moved in control mode, but a layout can be edited by returning to layout mode. The state of a delegate microphone can be altered by clicking on the appropriate icon. Synoptic Microphone Control offers the following microphone control mode options:

- Control by operator with request-to-speak list (manual)
- Control by delegate with request-to-speak list (open)
- Control by delegate with override of other delegate microphones (first-in-first-out)



The synoptic layout is stored in a layout file. There are a number of options available to the user for working with these files, all of which are standard DCN Next Generation file options. These consist of opening, creating and saving files under a new name. Delegate microphone activity can be recorded on file or sent to a printer. Microphone activity data is also made available for controlling external equipment such as an automatic camera system. Synoptic Microphone Control has a facility to automatically test and scan all installed microphones individually, with or without a sound generator. The microphone under test is indicated on-screen and the results of the test are made known to the system operator.

Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Single point of control. Standard Windows functions.

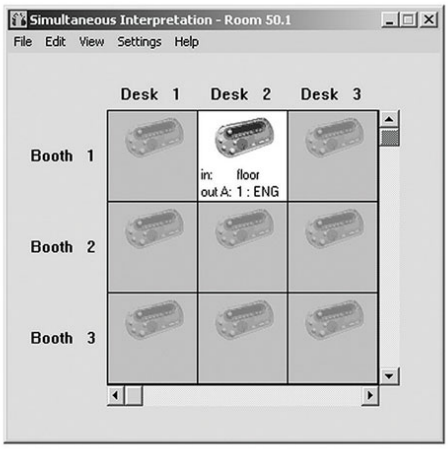
Ordering information

LBB 4171/00 Synoptic Microphone Control
DCN Next Generation classic PC synoptic microphone control software for controlling microphones by means of a synoptic layout.
Order number **LBB4171/00**

Software Options

LBB 4171/00-E Synoptic Microphone Control E-code
DCN Next Generation classic PC synoptic microphone control software for controlling microphones by means of a synoptic layout, electronic authorization code.
Order number **LBB4171/00-E**

LBB 4172/00 Simultaneous Interpretation



Features

- Can accommodate 186 interpreter desks
- Online monitoring of interpretation activities
- Facilitates normal and relay interpretations
- Microphone mode options
- Specifying a language for each of the system interpretation channels

Simultaneous interpretation is essential for international conference venues. The Simultaneous Interpretation program supports the preparation of simultaneous interpretation facilities and the monitoring of interpreter activities during a conference. It accommodates 31 interpreter booths, each with up to 6 interpreter desks.

Functions

The main window has two display modes, both with graphics for easy management of information. One gives a channel-oriented overview of system status, such as which language is present on that channel, the mnemonic for that language, on which language the interpretation is based, and the number of the desk and booth generating that language. The other display mode gives the same information in a different form, providing an overview of the status of each desk in each booth. This includes booth and desk status (active or non-active), and the language in and out of each active desk. In addition, the software enables the operator to establish microphone interlocks, between booths and within booths, with or without using an override facility. In interlock mode, the active microphone must first be turned off before any other microphones can become active. In override mode, any microphone can automatically override the current active microphone and become active. The interpreter system settings are stored in an interpreter configuration file. There are a number of options available to the user for working with these files, all of which are standard DCN NG file options. These consist of opening, creating and saving files under a new name. A print function enables a hard copy printout of desk and channel language assignment– ideal for use as a reference to current system settings.

Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Interpreter system settings are stored in an interpreter configuration file.

Ordering information

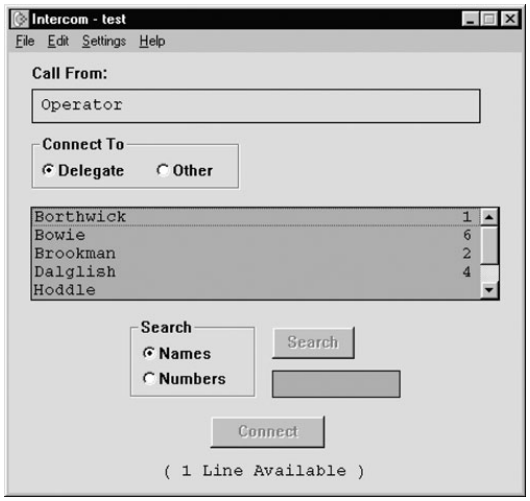
LBB 4172/00 Simultaneous Interpretation
DCN Next Generation classic PC simultaneous interpretation. Supports the preparation of simultaneous interpretation facilities and the monitoring of interpreter activities during a conference.
Order number **LBB4172/00**

Software Options

LBB 4172/00-E Simultaneous Interpretation E-code
DCN Next Generation classic PC simultaneous interpretation. Supports the preparation of simultaneous interpretation facilities and the monitoring of interpreter activities during a conference, electronic authorization code.
Order number **LBB4172/00-E**

2

LBB 4173/00 Intercom



Features

- Enables private, two-way conversations between delegates, chairmen, interpreters and other PC users
- Search facility to locate delegates
- Allows up to 5 simultaneous conversations
- Simple menus for ease of control
- On-screen help facility

The Intercom software module forms the basis of a communication system that allows conference participants to hold two-way private conversations. It provides a means of setting up and controlling intercom calls between delegates, chairmen, interpreters and other PC-users during a conference.
It allows several types of calls to be made:

- Participant to / from operator
- Between participants
- Interpreter to/from operator
- Between interpreters
- Participant to/from interpreter
- Between PC operators in a multi-PC system

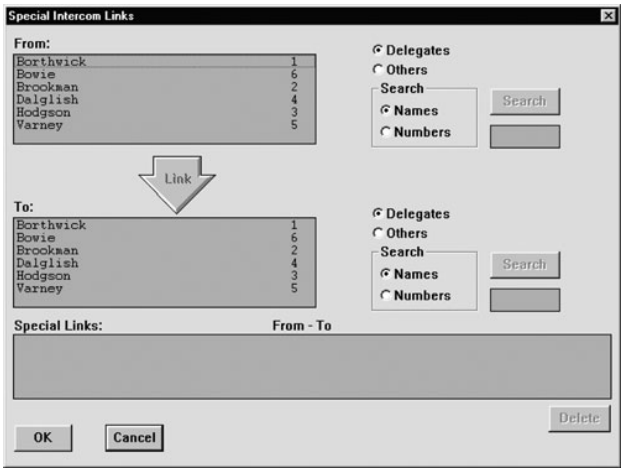
Functions

The Intercom software is used in combination with the Intercom Handset and Cradle. It provides assistance in both the pre-conference creation of an intercom network, and the routing and controlling of intercom calls once the conference is underway. Preparation work includes assigning special intercom links between participants, interpreters or both. Once the conference is taking place, the operator can establish and re-route intercom calls via simple on-screen windows. Each intercom link uses a system channel. The maximum number of intercom links is 5. If no intercom links are assigned, the intercom module will not start.

Notice
The number of DCN Next Generation audio channels available for intercom purposes is set using the System Installation software LBB 4185/00.

Notice
Delegate Database LBB 4180/00 is required if delegate names are used.

Notice
Simultaneous interpretation LBB 4172/00 is required if interpreter names are used.



Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Software is used in combination with the Intercom Handset and Cradle.

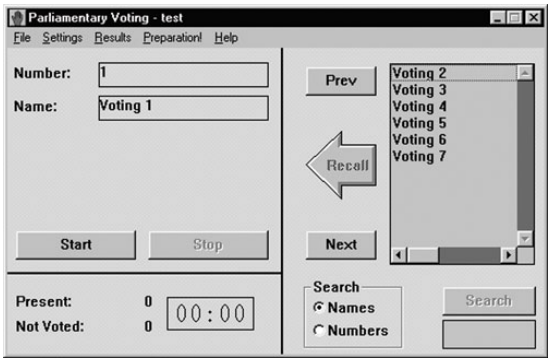
Ordering information

LBB 4173/00 Intercom
DCN Next Generation classic PC intercom software, allows conference participants to hold two-way private conversations.
Order number **LBB4173/00**

Software Options

LBB 4173/00-E Intercom E-code
DCN Next Generation classic PC intercom software, allows conference participants to hold two-way private conversations, electronic authorization code.
Order number **LBB4173/00-E**

LBB 4175/00 Parliamentary Voting



Features

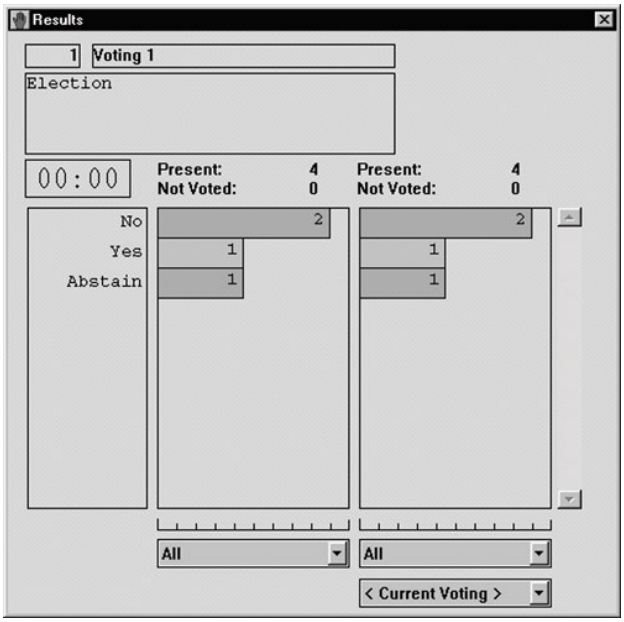
- Allows complete operator control of parliamentary voting sessions
- Extensive motion preparation facilities
- Can output voting results to disk, hall displays or printers
- Wide range of vote-related parameter options
- On-screen help facility

The Parliamentary Voting module is a DCN Next Generation software module designed for controlling and monitoring conferences and discussions using the DCN Next Generation contribution equipment. The module allows an operator to implement and manage voting at a conference.

Functions

The program covers a number of functions including vote preparation, specifying vote-related parameters, and starting and controlling voting. The module has two main windows; the Preparation window and the Control window. The preparatory and parameter definition work is mainly carried out from the Preparation window, and the starting and controlling of voting is carried out from the Control window.
The files created using this module are called script files as they act as the script for voting procedures. The file menu allows script files to be opened, created, deleted, saved, saved under a different name, imported and printed out.
A script file consists of a number of proposals or motions (between 1 and 999), each of which will be voted on. New ones can be created and existing ones edited within script files. Items to be edited are selected from a list in the currently open script file and displayed on-screen. All parameters related to this can be altered, although certain parameters have to satisfy system-specified criteria. Once a n item has been edited it is inserted back into the list. Every item must have a unique number, which is used by the DCN Next Generation system as a reference. The name and description of each defines it for both users and delegates. It is also possible to enable a quorum function. This specifies how many authorized delegates must be present before voting can legitimately take place. A majority function determines what percentage of votes constitutes a majority voting. Once a vote is ready to be taken, it is recalled in the Control window and the voting process is started. When the program enters the active voting state, delegates can use their delegate units to register votes. The user has full control over the voting procedure, and can stop or suspend a vote at any time. Motions that have already been voted on cannot be edited, but voting again on the same motion is possible. It is also possible to vote without opening a script file.
The program offers the possibility of displaying incoming votes or the final result of a vote on hall displays connected to the DCN Next Generation system, on delegate units with a display facility, and on-screen. It is possible to print out a hard copy of a vote with its results. There is also a facility that automatically prints out the results of a vote once voting is completed.

Notice
Delegate Database LBB 4180/00 is required if delegate names are used.



Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Delegate Database LBB 4180/00 is required if delegate names are used.

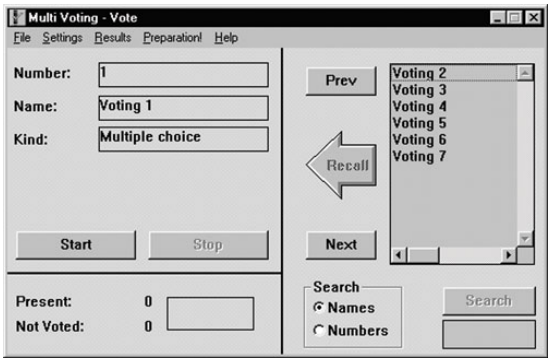
Ordering information

LBB 4175/00 Parliamentary Voting
DCN Next Generation classic PC parliamentary voting, allows an operator to implement and manage voting at a conference.
Order number **LBB4175/00**

Software Options

LBB 4175/00-E Parliamentary Voting E-code
DCN Next Generation classic PC parliamentary voting, allows an operator to implement and manage voting at a conference, electronic authorization code.
Order number **LBB4175/00-E**

LBB 4176/00 Multi Voting



Features

- Allows selection between six different kinds of voting
- Extensive voting preparation facilities
- Wide range of vote-related parameter options
- Choice of three voting results display types
- On-screen help facility

This software module provides the means to select and control six different kinds of conference voting, including Parliamentary Voting. The voting types that can be implemented or selected are:

- Parliamentary
- Opinion Poll
- Audience Response
- Rating
- Multiple Choice
- For/Against

In each case, the program allows the user to prepare for voting, specify vote-related parameters, display and print voting results and start and control voting.

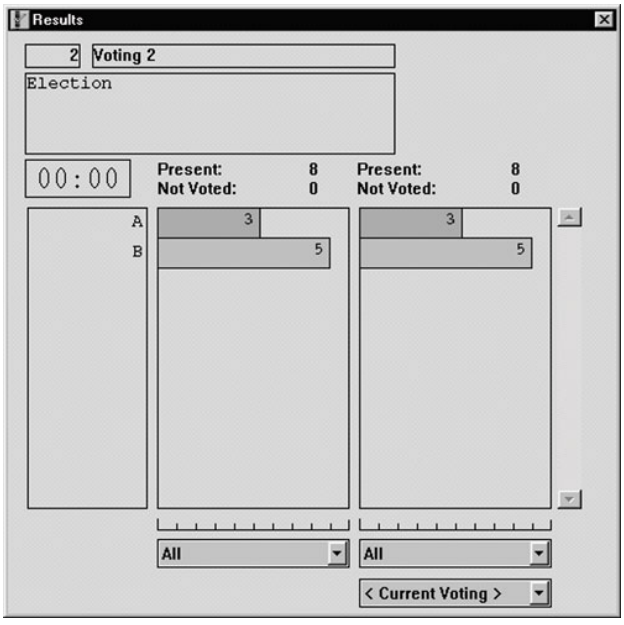
Functions

There are two main windows: the Preparation window and the Control window. The Preparation window is where voting motions are created and parameters are defined or changed. The Control window is used for starting and controlling voting. There is also a Results window for displaying voting results. These can be displayed in bar-, pie- or thermometer charts. It is also possible to see voting results while the voting is still taking place. These ‘interim results’ can be specified in the Preparation window. It is also possible to enable a quorum function. This specifies how many authorized delegates must be present before a voting can legitimately take place. A majority function determines what percentage of votes constitutes a majority voting. The files created are called script files as they act as the script for voting procedures. A file menu allows script files to be opened, created, saved, deleted and printed. There is also a facility for importing script files that have been created and saved in another application. Each script file can consist of a number of voting motions (up to 9,999), each of which can be selected from a ‘voting motions list’ in the Preparation window. Once selected, a voting can be edited and then inserted back into the voting list. All parameters related to the voting can be altered although certain parameters have to satisfy system specific criteria. A search facility is provided to help locate specific voting motions. Vote-related parameters can be specified for each individual voting.
These are:

- Vote type (open or closed, majority or non-majority, timed or non-timed)
- Time related options
- Results display style
- Interim results display
- Screen and print legends
- Hall display, vote weighting, roll call, voting LEDs and abstain options

Once a motion is ready to be voted on, delegates can register votes on their delegate units. Multi Voting incorporates a roll call function which, when activated, means that delegates must vote in a predetermined order that is specified in the Delegate Database Module (LBB 4180/00). Otherwise, delegates can vote in any order at the same time. Voting without a script is also possible, and the same functions are available as with a script. Voting can be stopped or suspended at any time, and incoming votes or the final result of a vote can be displayed on hall displays connected to the DCN Next Generation system, on delegate units with a display facility and on-screen. The user can print the final result of a vote, and it can also be automatically exported to a file.

Notice
Delegate Database LBB 4180/00 is required if delegate names are used.



Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is

not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Delegate Database LBB 4180/00 is required if delegate names are used.

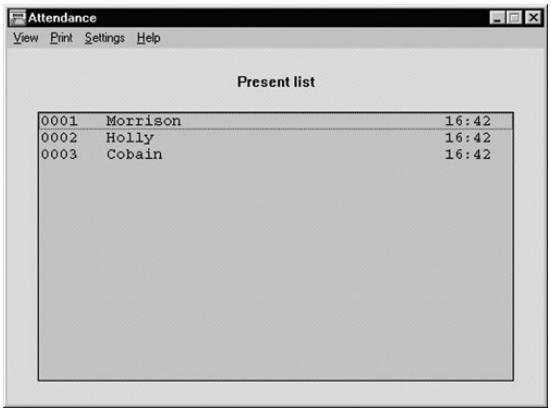
Ordering information

LBB 4176/00 Multi Voting
DCN Next Generation classic PC multi-voting software for selecting and controlling six different kinds of conference voting, including Parliamentary Voting.
Order number **LBB4176/00**

Software Options

LBB 4176/00-E Multi Voting E-code
DCN Next Generation classic PC multi-voting software for selecting and controlling six different kinds of conference voting, including Parliamentary Voting, electronic authorization code.
Order number **LBB 4176/00-E**

LBB 4178/00 Attendance Registration



Features

- Registration using chip card with or without PIN-code, or present key
- Access control facilities
- All data instantly available to operator
- Print facility to reproduce data in several formats
- On-screen help facility

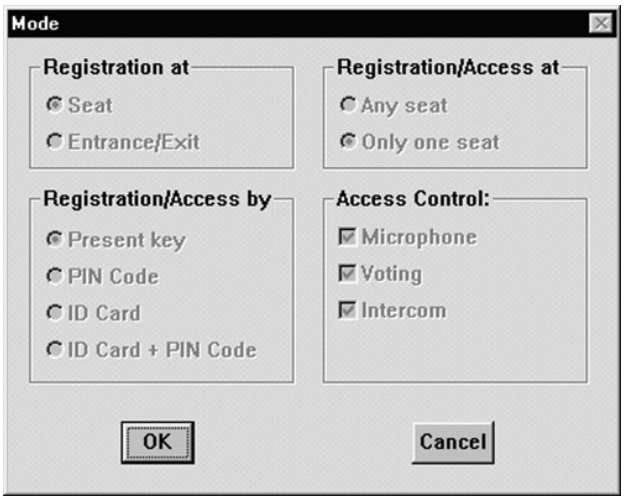
This software module is used when registering for a conference room, and for accessing facilities in the conference room.

Functions

The functionality of Attendance Registration falls into two categories:

Registration:
It is possible to specify entrance requirements that conference participants have to meet before entering the conference room. This normally means participants have to insert a chip card in a chip card reader, either at the entrance to the conference venue or at the contribution unit. Registration at a contribution unit can also be by means of pressing the 'Present' key. It is possible to display lists on-screen of all 'present' and 'absent' participants, and print hard copies of these lists. There is also a window that can be permanently displayed on-screen that gives an overview of all participants who have registered their presence or absence.

Access:
The settings specified for registration can also be used for access. This means that although participants can enter the conference venue, they cannot use any of the contribution unit facilities (such as microphone, voting, intercom) without first satisfying access requirements. Access is also controlled by means of chip cards, with or without PIN code. There is also an option whereby participants register their presence at the entrance using a chip card reader, and a specific contribution unit is then made available for them. You can also control where participants sit by specifying whether they can occupy any seat or a particular, pre-defined one.



Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Registration using chip card or present key.

Ordering information

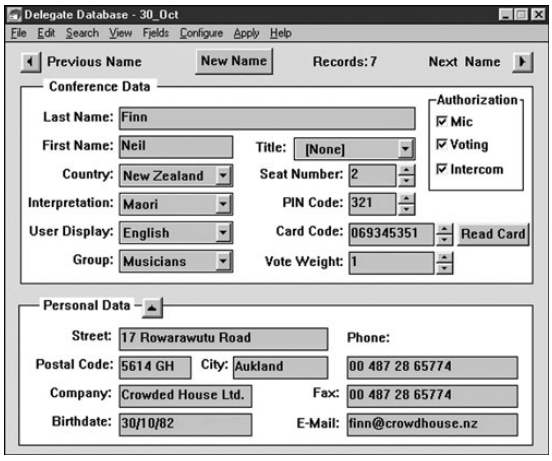
LBB 4178/00 Attendance Registration
DCN Next Generation classic PC attendance registration software for registering and accessing facilities in the conference room.
Order number **LBB4178/00**

Software Options

LBB 4178/00-E Attendance Registration E-code
DCN Next Generation classic PC attendance registration software for registering and accessing facilities in the conference room, electronic authorization code.
Order number **LBB4178/00-E**

2

LBB 4180/00 Delegate Database



Features

- Comprehensive database creation for all delegates
- Facility for configuring ‘screen line’ and ‘card label’
- Facility for printing labels and chip card production
- Dedicated fields for ease-of-use
- On-screen help facility

The Delegate Database software allows users to compile a comprehensive database of information relating to participants at a conference or meeting. The delegate information is classed as either ‘conference-related’ or ‘personal’.

- Conference-related deals with parameters like interpretation language, vote weight and authorization. This data is used by the DCN Next Generation for conference controlling
- Personal information deals with data such as home address and telephone number, date of birth and fax number. This data is for reference only

Functions

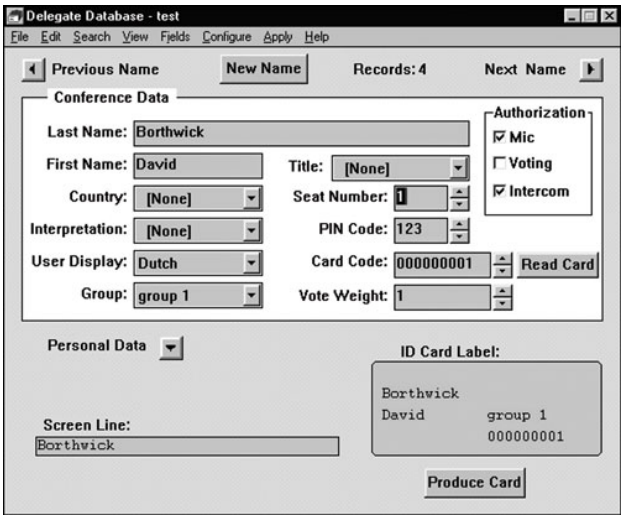
The data for each delegate is stored in a ‘screen card’, which contains delegate data in dedicated fields. Screen cards are stored collectively in a names file. There are a number of options available to the user for working with these files, all of which are standard DCN Next Generation file options. These consist of opening, creating, deleting and saving files under a new name. All information is entered via a PC, before or during conference proceedings. A considerable amount of data can be specified for each conference participant. Many parameters are not general but delegate specific, including:

- PIN Code
- Card Code for chip card
- Delegate group
- Delegate country
- Delegate name
- Delegate vote weight
- Delegate seat number
- Language of delegate screen display (French, German, Italian, Dutch, English, Portuguese, Japanese or Spanish)
- Simultaneous interpretation language

If the Chip Card Encoder (LBB 4157/00) and printer are connected to the DCN Next Generation system, chip cards can be encoded by using the ID Card Encoder module (LBB 4181/00) and the labels for the chip cards printed. It is also possible to grant or deny authorization to individual delegates for the following:

- Microphone
- Voting
- Intercom

This is possible when they use an ID card to register, and is carried out using the Attendance Registration and Access Control module (LBB 4178/00). All delegate data is input via the main window. For some entries (first name, last name) the only restriction is the number of characters entered. For other entries (country, group, etc.), the input can easily be selected from a list of options that is presented by the system when the user activates that particular field. This options list can be edited and expanded by the user. In the personal data section, the user can input such delegate data as date-of-birth, address, telephone number, fax and E-mail number. Certain fields within the screen card can be identified in order to print on an ID card label, or associated (as a screen line) with other software packages such as Microphone Management and Attendance Registration and Access Control.



Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Information is entered via a PC to compile a database.

Ordering information

LBB 4180/00 Delegate Database
DCN Next Generation classic PC delegate database software for compiling a comprehensive database of information relating to participants at a conference or meeting.
Order number **LBB4180/00**

Software Options

LBB 4180/00-E Delegate Database E-code
DCN Next Generation classic PC delegate database software for compiling a comprehensive database of information relating to participants at a conference or meeting, electronic authorization code.
Order number **LBB4180/00-E**

DCN-IDENC ID Card Encoder (USB)

Features

- USB (2.0) supported
- ID card supported (DCN-IDCRD)
- Supported by DCN-SW and LBB 4190/00

The ID Card Encoder (USB) is used to encode ID cards (DCN-IDCRD). It is used in combination with the following Conference software modules: ID Card Encoder (DCN-SWID), Delegate Database (DCN-SWDB) and Conference Software Main module (DCN-SW).
The DCN-IDENC can also be used with the LBB 4181/00 from software version 2.80 onwards.

Certifications and approvals

FCC part 15 Class B, UL, CE, VCCI

EMV 2000 Level 1

Technical specifications

Electrical

Power supply	Through USB bus
Indication on top of unit	One dual state green LED
Operating System	XP, Server2003, Vista
ID card supported	DCN-IDCRD

Mechanical

Cable	1.5 m long with USB type A connector
Dimensions (H x W x D)	10 x 70 x 70 mm (0.39 x 2.8 x 2.8 in)
Weight	60 g (0.13 lb)

Environmental

Operating temperature	0 ° to +50 °C (+32 °F to +122 °F)
Storage temperature	-20 ° to +60 °C (-4 °F to +140 °F)
Relative humidity	15% to 90%

Ordering information

DCN-IDENC ID Card Encoder (USB)
DCN Next Generation ID card encoder (USB) to be used with ID Card Encoder (DCN-SWID), and DCN-SW and DCN-SWDB software modules.
Order number **DCN-IDENC**

DCN-SWID Conference Software ID Card Encoding
DCN Next Generation conference software, ID-card encoding software for producing ID-cards. To be used with DCN-IDENC, DCN-SW, and DCN-SWDB.
Order number **DCN-SWID**

DCN-SW Conference Software Main Module
DCN Next Generation conference software main module, a platform for running all other conference software modules.
Order number **DCN-SW**

DCN-SW-E Conference Software Main Module E-code
DCN Next Generation conference software main module, a platform for running all other Conference software modules, electronic authorization code.
Order number **DCN-SW-E**

DCN-SWDB Conference Software Delegate Database
DCN Next Generation conference software delegate database. To be used with DCN-SW.
Order number **DCN-SWDB**

DCN-SWDB-E Conference Software Delegate Database E-code
DCN Next Generation conference software delegate database. To be used with DCN-SW, electronic authorization code.
Order number **DCN-SWDB-E**

Accessories

DCN-IDCRD ID Card (100 pcs)
DCN Next Generation ID card, standard credit-card format (set of 100 pieces).
Order number **DCN-IDCRD**

DCN-IDCRD ID Card (100 pcs)

Features

- Attractive design
- Ample space for a name or other delegate personal information
- Clear instructions showing how to insert the card into a reader

These standard credit-card format ID cards are used by delegates to identify them to the DCN Next Generation system. This can be a pre-requisite for access to contribution units and activities such as attendance registration and voting.

Technical specifications

Mechanical

Dimensions (H x W)	85 x 54 mm (3.3 x 2.1 in)

Ordering information

DCN-IDCRD ID Card (100 pcs)
DCN Next Generation ID card, standard credit-card format (set of 100 pieces).
Order number **DCN-IDCRD**

LBB 4181/00 ID Card Encoder

Encoder software is used in combination with the Delegate Database software (LBB 4180/00) as a software driver for producing ID cards. These ID Cards are used to identify delegates during a conference and contain information specified using Delegate Database. An encoding unit (DCN-IDENC) is also required to produce the ID cards.

Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

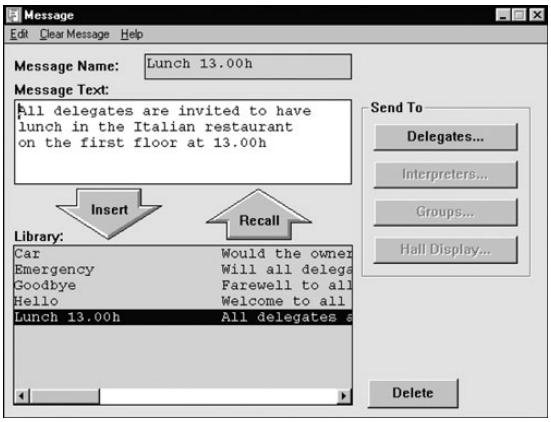
Ordering information

LBB 4181/00 ID Card Encoder
DCN Next Generation classic PC ID card encoder software driver for producing ID cards.
Order number **LBB4181/00**

Software Options

LBB 4181/00-E ID Card Encoder E-code
DCN Next Generation classic PC ID card encoder software driver for producing ID cards, electronic authorization code.
Order number **LBB 4181/00-E**

LBB 4182/00 Message Distribution



Features

- Message distribution to personal or hall displays
- Easy message generation procedure
- Archiving facility allows messages to be retrieved and re-used
- Automatic message removal option
- On-screen help facility

The Message Distribution software allows the operator to originate messages that can be sent via the DCN Next Generation to individual delegates, groups of delegates and other participants to view on their units. Messages can also be sent to hall displays for general viewing by the public and delegates.

Notice
Message text is only available on delegate units with display.

Functions

Message handling
Messages created can be stored in a library for later use. There is a facility that automatically removes messages after they have been displayed for a pre-specified period of time.

Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

The Message Distribution software can be used in combination with the Video Display software (LBB 4184/00) and the Text/Status Display software (LBB 4183/00).

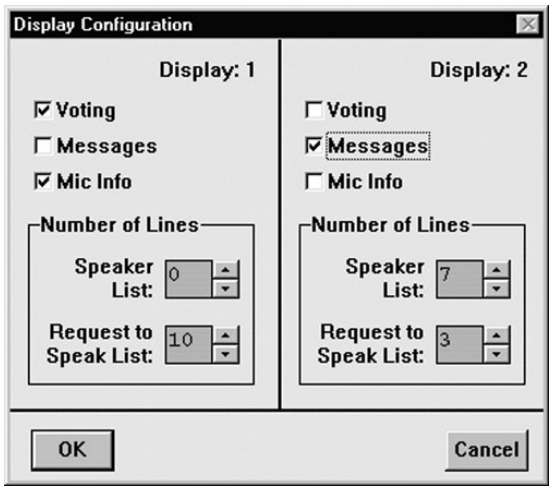
Ordering information

LBB 4182/00 Message Distribution
DCN Next Generation classic PC message distribution software. Allows the operator to originate messages that can be sent via the DCN Next Generation to delegates.
Order number **LBB4182/00**

Software Options

LBB 4182/00-E Message Distribution E-code
DCN Next Generation classic PC message distribution software. Allows the operator to originate messages that can be sent via the DCN Next Generation to delegates, electronic authorization code.
Order number **LBB4182/00-E**

LBB 4183/00 Text/Status Display



Features

- Supports numeric, alphanumeric and geographic displays
- Displays voting, message and microphone information
- Automatic priority system for displays
- Accepts information from other DCN Next Generation software modules
- On-screen help facility

The Text/Status Display module provides a means of displaying conference-related information on character displays in the conference venue. Almost all displayed information is generated by other DCN Next Generation modules. The text that appears on screen to accompany voting results can be generated using Text/ Status Display. It is also possible to specify the display length of the speakers list and the request-to-speak list.

Functions

Text/Status Display accepts the following types of display information:

- Voting Results display. This information is generated using the Parliamentary Voting module (LBB 4175/00) and consists of a voting motion (number, description, time) and the results of the vote on that motion
- Messages display. This information is generated using the Message Distribution (LBB 4182/00) and consists of a conference-related text message
- Microphone Information display. This information is generated either using the Microphone Management module (LBB 4170/00) or the Synoptic Microphone Control module (LBB 4171/00). It consists of a list of delegates whose microphones are active and those waiting to speak This software supports three different types of conference venue displays:
  - Numeric display. This is typically a dot matrix display of only a few characters per line, and allows only purely numerical information to be displayed
  - Alphanumeric display. Also typically a dot matrix display, but for up to 10 lines of 33 characters. Information can be displayed using both text and numbers
  - Geographic or status display. This kind of display gives information on the voting status of each conference participant (if the vote is non-secret). A representation of the seating plan and different colored LEDs for vote status are used to achieve this.

Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Displayed information can be generated by modules LBB 4175/00, LBB 4182/00, LBB 4170/00, LBB 4171/00.

Ordering information

LBB 4183/00 Text/Status Display
DCN Next Generation classic PC text/status display software for displaying conference-related information on character displays in the conference venue.
Order number **LBB4183/00**

Software Options

LBB 4183/00-E Text/Status Display E-code
DCN Next Generation classic PC text/status display software for displaying conference-related information on character displays in the conference venue, electronic authorization code.
Order number **LBB4183/00-E**

LBB 4184/00 Video Display

Features

- Interface to monitors, video projectors and Vidi-walls

Video Display is unlike all other DCN Next Generation modules in that there is no user action required to operate it. It automatically interfaces the DCN Next Generation software with video displays. It provides a means of displaying conference-related information on video displays located in the conference venue. The information can consist of text, numbers and graphical elements like bar charts. All information displayed is generated by other DCN Next Generation modules, and it is not possible to alter this information in Video Display.

Functions

To use Video Display, it is necessary to have a Video Display (VD) Client application. The VD Client application receives the information that is passed to it from the Video Display (server) module. The user can change settings related to how information is displayed on the video screens, such as text or background colors. This can be carried out either during or after installation of Video Display. This VD Client application accepts four different types of display information:

- Voting Results display. A voting motion and the results of the vote on that motion.
- Message display. A conference-related text message (e.g. when and where lunch will be, or when tomorrow's session will begin).
- Microphone Information display. A list of delegates whose microphones are active and those waiting to speak.
- Attendance registration display. Information about how many delegates are absent or present.

Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

All information displayed is generated by other DCN Next Generation modules.

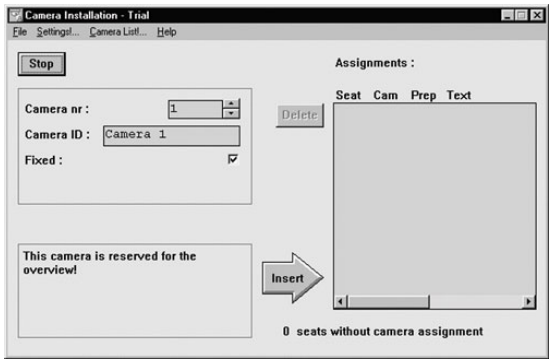
Ordering information

LBB 4184/00 Video Display
DCN Next Generation classic PC video display software for displaying conference-related information.
Order number **LBB4184/00**

Software Options

LBB 4184/00-E Video Display E-code
DCN Next Generation classic PC video display software for displaying conference-related information, electronic authorization code.
Order number **LBB4184/00-E**

LBB 4188/00 Automatic Camera Control



The DCN Next Generation Automatic Camera Control software interfaces DCN Next Generation conference systems with the Bosch Allegiant series of video control switchers. It selects fixed or pre-positioned cameras (such as the Bosch AutoDomes) to be activated to display the current active speaker at a conference.

Functions

When a chairman or delegate microphone is activated on the DCN Next Generation equipment, the camera assigned to that position is activated. When no microphones are active, an overview camera is automatically selected. The image can be displayed on hall displays or other monitors together with information about the current speaker if required (such as delegate identification). The system operator has a monitor, which also displays information about which camera is active. This system provides an extra dimension to conference proceedings.

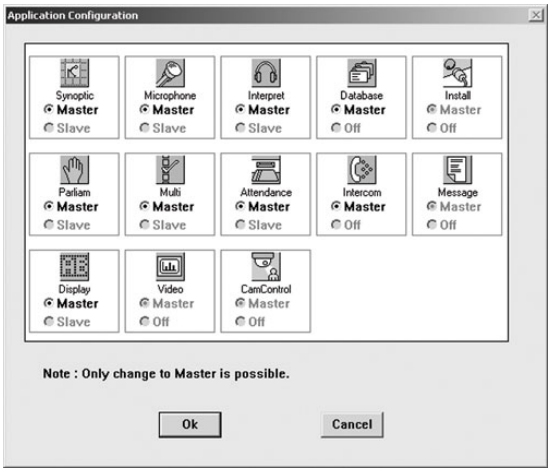
Ordering information

LBB 4188/00 Automatic Camera Control
DCN Next Generation classic PC automatic camera control software, interfaces DCN Next Generation conference systems with the Bosch Allegiant series of video control switchers.
Order number **LBB4188/00**

LBB 4188/00-E Automatic Camera Control E-code
DCN Next Generation classic PC automatic camera control software, interfaces DCN Next Generation conference systems with the Bosch Allegiant series of video control switchers, electronic authorization code.
Order number **LBB4188-E**

LBB 4162/00 Stand-Alone Automatic Camera Control
LBB 4162/00 Stand-Alone Automatic Camera Control for systems without PC control.
Order number **LBB4162/00**

LBB 4189/00 Multi PC



Features

- Master / Slave configuration
- On-screen help facility

The Multi PC software module is needed when more than one PC is required to control the DCN Next Generation system. All Slave PCs in a multi-PC environment are connected via Ethernet to the Master PC, which is connected the CCU.

Functions

This module sets up the master/slave mode of all other modules in a multi PC environment. The Multi PC configuration is accessed from the menu in the Startup screen (LBB 4190/00).

Installation/configuration notes

This classic software module is intended for wired DCN Next Generation systems using the DCN-CCU and optional DCN-NCO. Please note that the classic software is not compatible (will not work) with the new DCN-CCU2 and DCN-CCUB2 and also it will not work with DCN Wireless.

Ordering information

LBB 4189/00 Multi PC
DCN Next Generation classic PC Multi-PC software, required when more than one PC is used to control the DCN Next Generation system.
Order number **LBB4189/00**

Software Options

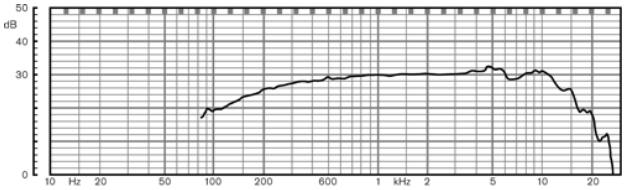
LBB 4189/00-E Multi PC E-code
DCN Next Generation classic PC Multi-PC software, required when more than one PC is used to control the DCN Next Generation system, electronic authorization code.
Order number **LBB4189/00-E**

Technical Data

Conforms to international standard IEC 60914, the international standard for conference systems.

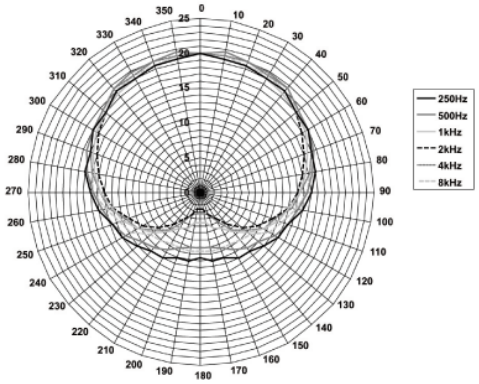
2

Microphones



Microphone frequency response

Frequency response	100 Hz to 16 kHz
Transducer type	Condenser
Directional pattern	Cardioid
Sensitivity	9.3 mV at 85 dB SPL (Rl=3k3, U=5V)
Max. SPL for THD	< 3 % 110 dB
Equivalent input noise level	24 dB lin, 21 dBA



Microphone polar diagram of LBB 4149 measured with pink noise in octaves

	250	500	1k	2k	4k	8k	Hz
F-Rear Sensitivity Index	10.5	12	15.5	17.5	17	11.5	[dB]
F-Random Sensitivity Index	3.7	3.7	4.6	5.0	4.3	3.9	[dB]

Transmission links

- From delegate to interpreter
- From delegate to delegate
- From interpreter to delegate
- From interpreter to interpreter
- From auxiliary input to delegate
- From auxiliary input to interpreter
- From delegate to auxiliary output
- From interpreter to auxiliary output

General

Frequency response	125 Hz to 20 kHz*
Harmonic distortion	< 0.5 %
Harmonic distortion at overload	< 1 %
Crosstalk attenuation at 4 kHz	> 80 dB
Dynamic range	> 90 dB

* Intercom links: 125 Hz to 5 kHz

Combined units

- Delegate microphone with transmission link to interpreter headphone
- Delegate microphone with transmission link to delegate headphone
- Delegate microphone with transmission link to auxiliary output
- Interpreter microphone with transmission link to interpreter headphone
- Interpreter microphone with transmission link to delegate headphone
- Interpreter microphone with transmission link to auxiliary output

General

Typical frequency response	125 Hz (-8 dB) to 16 kHz (-8 dB)
Front-to-random sensitivity index	> 4.6 dB
Rated equivalent sound pressure level due to inherent noise	< 24 dB (A)
Total harmonic distortion at overload	< 1 %
Crosstalk attenuation	> 96 dB

System electrical and electro-acoustic characteristics

General

Normal input level	125 Hz (-8 dB) to 16 kHz (-8 dB)
Overload input level	> 4.6 dB
Automatic gain reduction at Overload input level	25 dB interpretation channels, 21 dB delegate loudspeaker channel (not for PA-floor output
Operator master gain control	24 x 1 dB and OFF (Mute)

System environmental conditions

General

Working conditions	125 Hz (-8 dB) to 16 kHz (-8 dB)
Temperature range - transport - operating	 -20 °C to +55 °C (-4 °F to +131 °F) +5 °C to +45 °C (+41 °F to +113 °F)
Relative humidity	15 - 90 % max.
Safety	According to IEC 60065, and according to CAN/CSA-E65 (Canada and USA) and UL6500

EMC emission	According to harmonized standard EN 55103-1 and FCC Rules (Part 15) complying with the limits for a class A digital device
EMC immunity	According to harmonized standard EN 55103-2
EMC approvals	Affixed with the CE mark
ESD	According to harmonized standard EN 55103-2
Mains harmonics	According to harmonized standard EN 55103-1
Other legal requirements	No cadmium used other than in the nickel cadmium battery housed in the central unit
Shock resistance	According to IEC 60069-2 – 29 Eb
Vibration resistance	According to IEC 60069-2 – 6 Fc

Power consumption and nodes

The Power Consumption and the nodes of units connected to a CCU have a bearing on the total number of such units that can be connected.

The maximum power of all units connected to DCN-CCU2 must not exceed 255 Watts.

The maximum number of nodes must not exceed 63.

The power of all units that can be connected to DCN-CCU2 is given below:

Device	Watt	Nodes
DCN-DISS / DCN-DISL	2.75	-
DCN-DISD	2.8	-
DCN-DISCS	2.9	-
DCN-DISDCS	3.15	-
DCN-DISV	3.05	-
DCN- DISVCS	3.20	-
DCN-CON	3.4	-
DCN-CONCS	3.7	-
DCN-CONFF	4.2	-
DCN-CONCM	4.2	-
DCN-DDB	2	-
DCN-DDI	4.9	-
DCN-EPS	0.1	-
DCN-FCS	0.9	-
DCN-FVU	1.0	-
DCN-FVU-CN	1.0	-
DCN-IDESK	3.6	-
LBB 4114/00	1.3	-
LBB 4115/00	1.4	-
DCN-CCU2	n.a.	2
DCN-WAP	4	1
LBB 4402/00	7.6	1
PRS-4DEX4	6	1
LBB 4404/00	10.5	1
LBB 4414/10	4.6	1*
LBB 4410/00	3.9	1
INT-TX04	-	1
INT-TX08	-	2
INT-TX16	-	4
INT-TX32	-	8

* LBB 4414/00 does not count in the maximum of 63 nodes

DCN network limits

- Control capacity
  - The maximum number of active devices that a central control unit can control is 245.
  - The number of passive devices is without limit.
  - The maximum number of data distribution boards in the system is 15.
  - A multi-CCU system can contain maximum 30 CCU's and a total of 4000 active devices.
- Power capacity
  - The maximum power that one DCN socket of the central control unit can supply is 85 W.
- Loop-through
  - The maximum number of loop-throughs in succession for active devices is 25, where 4 m additional extension cable is the equivalent of 1 device. If there are more than 25 loop-throughs of active units, or an equivalent mix with passive devices and additional extension cable, the signal must be regenerated with a trunk splitter (LBB4114/00).
  - The maximum number of loop-throughs in succession for passive devices is 50, where 2 m additional extension cable is the equivalent of 1 passive device. If there are more than 50 loop-throughs of active units, or an equivalent mix with additional extension cable, the signal must be regenerated with a trunk splitter (LBB4114/00).
  - In case active and passive units are mixed in the trunk line, all units need to be seen as active units with their corresponding loop-through limit of 25.
- Tap-off connections
  - The maximum connections in succession between the central control unit and the last tap-off in a branch are four.
- Cable-lengths
  - With regenerative tap-offs, the maximum cable length is 250 m from the central control unit to the furthest device in any branch of the DCN. The maximum cable length of 250 m includes the device cables and extension cables.

Wireless network limits

- Control capacity
  - The maximum number of active devices in a DCN system, with one central control unit, is 245.
- Coverage area

  - For a good operation of the wireless part, all wireless discussion units need to be in range of the wireless access point. The wireless access point has a typical at least coverage area of 30 m by 30 m.
- Frequency
  - The wireless network must operate in a different frequency band than adjacent wireless (computer) networks.
- Number of language distribution channels
  - The wireless network has a maximum of 10 language distribution channels, excluding the channel for the floor. The total number of language distribution channels in the system, is set via the interpreter desk or the Conference control software.
  - If there are more than 10 Language Distribution Channels, only the first 10 channels will be available for the wireless network. All higher channels will only be available for the (wired) DCN network and/or the infrared Integrus network.

Optical network limits

- Number of nodes
  - The maximum number of nodes that you can connect to the optical network of the central control unit is 61.
- Number of WAPs
  - The maximum number of DCN-WAP Wireless Access Points in the optical network is 1.
- Cables
  - The maximum length of the standard network cable LBB4416/xx (Plastic Optical Fiber) cable is 50 m.
  - If longer cables are required, the PRS-FINNA can be used to convert from plastic to glass and vice versa. The maximum cable length of Glass Optical Fiber is dependent on the used Plastic Optical Fiber plus the equivalent cable length per used device.
  - The minimum bend radius of a 90 degree bend in a POF cable is 25 mm.
  - The minimum coiling radius of a POF cable is 100 mm.
- Power capacity
  - It is important that the devices in the optical network do not use more total power than you supply to the devices. Each device uses power and most devices do not have an independent power supply.

Notice

Refer to the DCN installation and operation manual and use the DCN calculation tool for DCN network limits in general.

CCS 900 Ultro Discussion System

3

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CCS 900 Ultro System

Features

- Designed for esthetic, acoustical and functional performance
- Unique, patent pending “Possible-To-Speak” indicator
- World-class recording solution for congresses and conferences
- Easy and convenient to use
- Future-proof extendibility

The CCS 900 Ultro Discussion System from Bosch brings order and convenience to small and middle-sized gatherings and conferences. This versatile and economical system is both simple to install and extremely straightforward to use. It has all the facilities required for achieving full control of meetings and discussions, without the need for an operator.

Ordering information

CCS-CU Control Unit
CCS 900 control unit, supplies power for all delegate and chairman units in the system, as well as the unit microphones, provides connections for the audio inputs and outputs.
Order number **CCS-CU**

CCS-CUD Control Unit with DAFS
CCS 900 control unit with the DAFS (Digital Acoustic Feedback Suppression) facility, supplies the power for all delegate and chairman units in the system, as well as the unit microphones, provides connections for the audio inputs and outputs.
Order number **CCS-CUD**

CCS-CURD Control Unit with Recorder and DAFS
CCS 900 Control Unit with recorder and DAFS, built-in recorder, graphical-display, recording buffer, and acoustic feedback suppression facility, supplies power for all units, provides connections for the audio inputs and outputs.
Order number **CCS-CURD**

CCS-CU-US Control Unit (US)
CCS 900 control unit, supplies power for all delegate and chairman units in the system, as well as the unit microphones, provides connections for the audio inputs and outputs. US version.
Order number **CCS-CU-US**

CCS-CUD-US Control Unit with DAFS (US)
CCS 900 control unit with the DAFS (Digital Acoustic Feedback Suppression) facility, supplies power for all units in the system, as well as the unit microphones, provides connections for the audio inputs and outputs. US version.
Order number **CCS-CUD-US**

CCS-CURD-US Control Unit with Recorder and DAFS (US)
CCS 900 Control Unit with recorder and DAFS, built-in recorder, graphical-display, recording buffer and acoustic feedback suppression facility, supplies power for all units, provides connections for the audio inputs and outputs. US version.
Order number **CCS-CURD-US**

CCS 900 Ultro Introduction

Bosch Security Systems: World-class Solutions for Meetings and Conferences
Bosch is pleased to introduce its latest innovation, the CCS900 Ultro Discussion System as the successor of the former CCS 800 Ultro System. It offers new design features and extra functions, including a patent-pending “Possible-To-Speak” indication. Designed and developed by Bosch experts in Europe, the system makes it easy to manage meetings and lets users record the proceedings digitally, via MP3.

Simple straight-forward installation
Designed for installation flexibility, the system is ideal for small-to-medium-scale meeting areas, such as town halls, local business centers and courtrooms. Each system includes a control unit (CU) connected to a number of delegate and chairman units. The advanced CU is equipped with a recording feature, including an easy-to-read LCD screen and a Secure Digital (SD) card slot. Like all Bosch products, the CCS 900 Ultro is backed by Bosch’s world-renowned customer support and service commitment.

Easy to Use & Easy to Install
Since it’s a plug-and-play, all-in-one discussion solution, the CCS 900 Ultro requires no special training or operator. Anyone can begin using the intuitive controls immediately. The display on the CU is language-independent, and the microphone mode and the volume level can be adjusted using the CU dials.

Innovative, Elegant Design
The CCS 900 Ultro is designed in Europe and reflects Bosch’s many years of experience in creating state-of-the-art conferencing equipment. It delivers excellent ergonomics, improved acoustical characteristics and a design that complements any interior, from new, ultra-modern buildings to traditional, centuries-old structures. It combines excellent acoustics, superior component design and intuitive use with eye-catching aesthetic quality, and is exclusively registered to Bosch.

Genuine Bosch Development
The microphones used in the CCS 900 Ultro delegate units, optimized for speech intelligibility, were specially developed by Bosch’s R&D department for conferencing. The new, patent-pending “Possible-To-Speak” indication is exclusive to Bosch. The DAFS (Digital Acoustic Feedback Suppressor) filtering algorithm is a Bosch-invented feature that has been used for years in Bosch’s conferencing and public address systems. The newly redesigned discussion unit delivers superior acoustical performance and reflects Bosch’s famous attention to detail.

A New, “Possible-To-Speak” Indication
The new, patent-pending “Possible-To-Speak” indicator gives delegates a visual indication when the microphone is available. Depending on the selected mode of the CU, up to four delegates can switch on their microphones simultaneously.

During the meeting, the “Possible-To-Speak” indication on each delegate unit displays one of three options: red, white or off. A red light indicates that the delegate actively has the floor. A white light indicates that it is possible to switch on the microphone for speaking, and an off light indicates that the maximum number of active microphones has been reached. The delegate must wait for the LED to light up white again, indicating that it is possible to switch on the microphone. Chairman units can always switch on microphones, regardless of who else has the floor. The “Possible-To-Speak” indication can be switched off if it’s not wanted.

Excellent Speech Intelligibility
Bosch’s European engineers designed the system with the best possible sound quality. Use of genuine Bosch DAFS ensures superb speech intelligibility. The technology employs proprietary DSP (Digital Signal Processing) functions to balance sound pressure levels and system gain above normal feedback limits. As a result, users can increase the volume to higher-than-normal levels without generating feedback or making the microphone “howl.” Authentic Bosch components and sophisticated design combine to provide the highest quality of sound amplification.

Recording from the Floor
With this compact all-in-one system, users can listen to the proceedings and participate directly in the discussion. The chairperson can digitally record and playback up to 64 hours of discussion using a 2-GB SD card. When it’s time to insert a new SD card, the patent-pending recording buffer stores the ongoing discussion for up to 60 seconds, so there’s no loss of data while changing cards. The LCD screen displays five soft-touch keys to control the menu: start, stop, pause recording, playback and change settings. The screen also displays date and time, file name, elapsed recording time, elapsed playback time, number of recorded tracks, used and remaining SD card memory, SD card availability status, menu icons, playback mode and a settings menu. To archive the proceedings on a PC, users can connect the CU to a computer via a USB port. Users can also dedicate a separate SD card reader to load files onto a PC. The CCS 900 Ultro provides several options for playback, including previously recorded segments, background music or pre-recorded messages and speeches. Before playing back recorded segments to the audience, it is possible to pre-listen to the recorded files via the CU.

Operational Flexibility and Discussion Control
The CCS 900 Ultro supports almost any kind of small- or medium meeting. The tabletop delegate units include a built-in loudspeaker, a microphone that’s activated with a single touch and two headphone sockets with volume control. The dedicated chairman unit adds a priority button, which mutes all active delegate microphones and sounds an “attention” tone. The CU supplies power for up to 50 units and each system can be expanded to support up to 150 units. Systems can be installed permanently or used in mobile applications. Rugged, custom-made transport suitcases protect the system when it’s stored or moved from site to site.

Operating Modes and Applications
Four easy-to-use operating modes give the CCS 900 Ultro added versatility for more focus on the conversation. For business discussions and small conferences, one to four microphones can be active simultaneously, with the chairman always having speaker priority. Unused microphones are switched off automatically if delegates forget to switch off their units. To support external participants (during town-council meetings, for example), extra microphones in any style (wired, wireless, handheld or podium) can be connected to the system. In specific applications like business meetings, the MP3 audio recording is typically used for writing meeting notices after meetings. In applications like courtrooms, the recorded testimony is used for archiving and evidence purposes. As an option, an individual microphone-output box can be integrated to extract individual microphone signals. Users with hearing problems can use earphones or, if they wear a hearing aid, can use Induction Loop Neckband. Double headphone sockets let two users share one microphone.

Future-proof
Value-added features, an elegant design, an excellent price/quality ratio and innovative technology make the CCS 900 Ultro system exceptional. The system is designed for future expansion, with the possibility of adding a wide range of additional equipment and auxiliary components, including an interpretation system, language distribution, an interface for tele/video conferencing and a public address system.
The Bosch CCS 900 Ultro is the ideal choice for small-to-medium-sized venues such as town halls, local business centers and courtrooms:

Innovative and authentic European design, established Bosch quality & reliability
- Subtle aesthetics with attractive look and feel
- Advanced acoustic design
- Unique, patent-pending “Possible-To-Speak” indicator
- Excellent speech intelligibility with genuine Bosch DAFS technology
- Built-in digital (MP3) recording and playback stored on removable SD cards
- Built-in, patent-pending recording buffer
- Conserves SD card memory by only recording when microphone is receiving audio
- Language-independent LCD user interface
- Full discussion control with four operating modes
- Highly flexible and customizable system supporting up to 150 units
- Easy plug-and-play installation: one-cable, daisy-chain connectivity
- Easy to use, no operator required
- Suitable for mobile or permanent installation
- Excellent entry-level price/quality ratio with future-proof extendibility
- Bosch’s years of experience developing state-of-the-art conference systems

Example 1 - Town hall

1: Control Unit with Recorder
2: Chairman Unit
3: Delegate Units
4: Plena Mixer Amplifier
5: XLA 3200 Line Array Speakers 60W (x2)
6: Microphone

Excellent speech intelligibility and delegate management

In small-to medium-sized applications, like town halls, there may be different types of discussions, but they all need excellent speech intelligibility. The CCS 900 Ultro, a flexible solution for this type of venue, makes it easy to conduct meetings without an operator. The chairman can guide the discussion, allowing individual delegates to speak or letting several delegates take the microphone simultaneously. Delegates are guided by a visual LED to know when to speak.

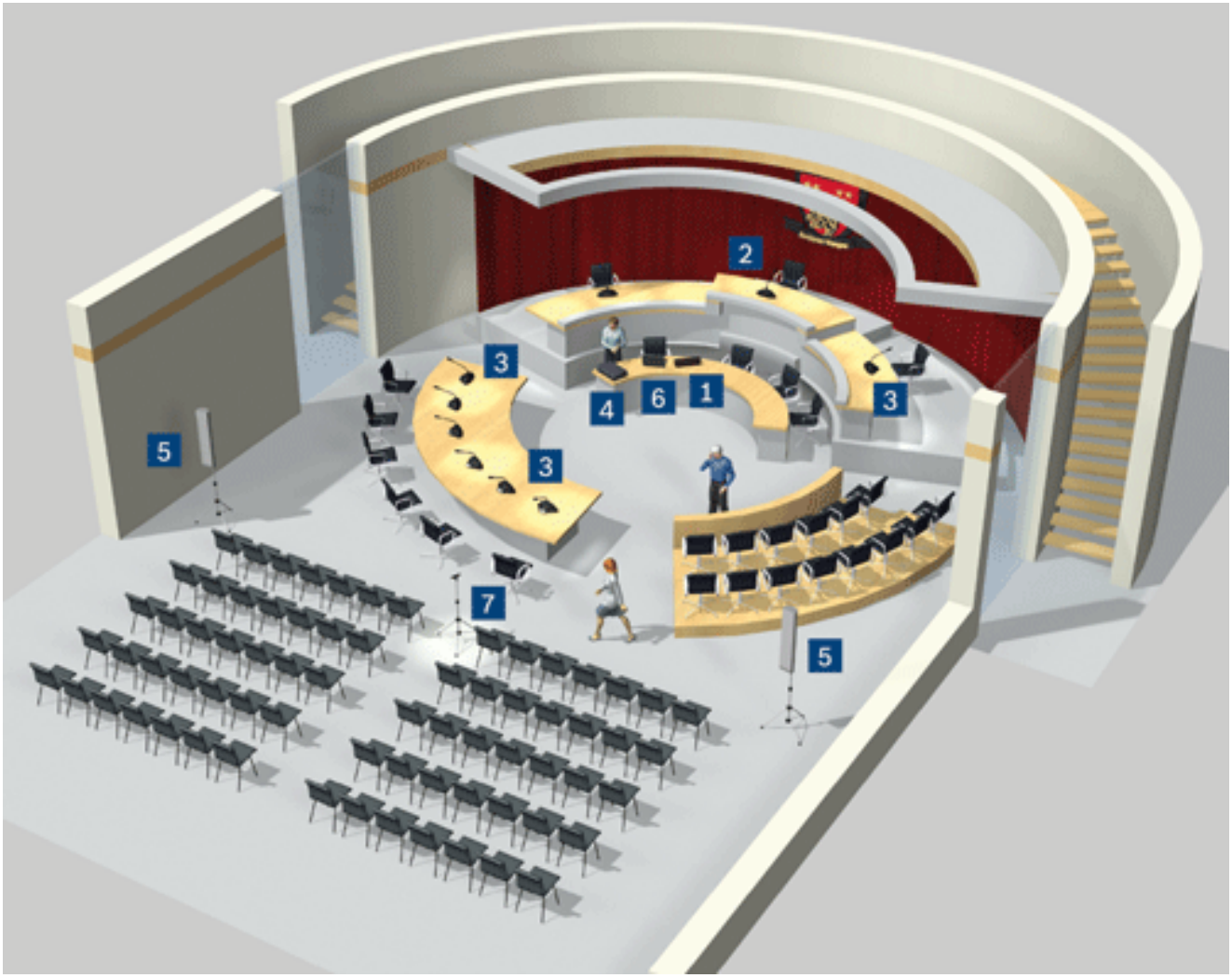
The daisy-chained system has an intuitive interface and is fast and easy to install. The system can easily handle external equipment like handheld microphones or a public address system to allow the audience to listen to the discussion.

Example 2 - (International) Business Conference Center

1: Control Unit with Recorder
2: Chairman Unit
3: Delegate Units
4: Video conferencing interface
5: Plena Mixer Amplifier 120W
6: XLA 3200 Line ArrayLoudspeakers 60W (x2)
7: Six-channel Analog Interpretation Desk
8: Integrus Transmitter
9: Integrus Radiators
10: Integrus Receivers
11: Wireless Microphone &Receiver
12: Camera system

Exellent choice for dynamic business environments
The CCS 900 Ultro Discussion System makes an excellent base installation for medium-scaled applications such as international business and conference centers. It can easily record an entire conference or event for accurate archival or publication. It is easily integrated with the Bosch Integrus Digital Infrared Language Distribution System. Since language selection occurs on the wireless Integrus receiver itself, this solution gives delegates and audience members access to simultaneous interpretations generated by interpreters at Bosch interpreter desks. There are a variety of integration possibilities, like a Bosch handheld microphone to speak or give presentations. Using an interface for tele- and video conferencing, two remote locations can be connected with each other.

Example 3 - Courtroom



1: Control Unit with Recorder
2: Chairman Unit
3: Delegate Units
4: Plena Mixer Amplifier 120W
5: XLA 3200 Line Array Speakers 60W (x2)
6: PC for archiving MP3 recordings
7: Microphone

MP3 recording and system expandability
In a typical courtroom, the CCS 900 Ultro system is a top performer, allowing people to participate directly in the hearing via table-top delegate units while the judge maintains order via the chairman unit.
Best of all, the CCS 900 Ultro system can record the entire session or key segments on removable SD Cards – an easy and accurate method for archiving on a PC or separate storage device, and playing back previous testimony. The system automatically denotes vital information like date, time, and tracking numbers on its icon-based LCD screen.
As an option, an individual microphone-output box can be integrated to extract individual microphone signals. Easily expandable, the CCS 900 Ultro features various connectivity options including headphone connections for the court clerks, additional external microphones and a Bosch Plena public address system for the public gallery as well as telephone conferencing, interpretation and videoconferencing possibilities.
The CCS 900 Ultro lets users record and archive MP3-compatible audio recordings on individual SD Cards*. The easy-to-use control unit LCD screen displays additional information such as the date and time, file name, elapsed recording time, number of recorded tracks, and memory status.
*not included

System Specifications

Features

- Attractive and modern design
- Possible-To-Speak indication
- High speech intelligibility is ideal for small to medium-sized meetings
- Built-in MP3 recorder
- Digital acoustic feedback suppression

Conforms to international standard IEC 60914, the international standard for conference systems.

Functions

- Two types of contribution unit (chairman and delegate)
- Delegate units enable participants to actively take part in a conference
- Control Unit controls and powers the microphones of contribution units and provides connections for audio inputs and outputs

Certifications and approvals

Safety	
according to EN 60065	
according to CAN / CSA-E60065	
according to USA / UL 60065	
Electromagnetic compatibility	
Emission	EN 55103-1, FCC rules (part 15) class A
Immunity	EN 50103-2
Mains harmonics	
prepared to EN 61000-3-2 and EN 61000-3-3	
Shock resistance, vibration resistance, bump and transport	
according to IEC 60068-2-6, 5G acceleration	

Technical specifications

Electrical

Contribution units	
DC supply	24 V ± 1 V (current limited)
Typical frequency response	125 Hz to 12.5 kHz tolerances according to IEC 60268-4, 5 standard
Total harmonic distortion	
at nominal input level (85 dB SPL)	< 0.5 %
at maximum input level (110 dB SPL)	< 1 %
Auto microphone switch-off function (selectable on the Control Unit)	
after 30 seconds without speech (sound level below 64 dB SPL), the microphone is switched off	

Environmental

Temperature	
Operating	+5°C to +45°C (+41°F to +113°F)
Storage and transport	-20°C to +70°C (-4°F to +158°F)
Humidity	
Operating	20% to 95% RH
Storage	up to 99% RH
Air pressure	600 to 1100 mBar

System limits and cabling

Maximum number of contribution units connected to Control Unit	50 units, (can provide control for 150 units)
Maximum number of contribution units per trunk output	25 units, (2 trunk outputs per Control Unit)
Maximum trunk length using CCS 800 Ultro standard cabling	100 m
Maximum control	150 units (consult your dealer for more information)

CCS-Dx CCS Delegate Unit

Features

- Unique, patent pending “Possible-To-Speak” indicator
- Compact, attractive design
- Built-in volume control for headphones
- Microphone with flexible stem and light ring
- Two headphone sockets

The CCS-Dx CCS Delegate Units enable delegates to actively take part in the proceedings. A built-in microphone allows them to speak to the other delegates, and they can listen to the discussion using the built-in loudspeaker or (optional) personal headphones.

Functions

Possible-To-Speak
A so called ‘Possible-To-Speak’ indicator is build-in showing if it is possible to switch on the microphone. This functionality is shown by a white LED combined with the ‘microphone on’ indicator.

Microphone with flexible stem and light ring
The microphone is mounted on a flexible stem, which is easily adjustable to suit personal preferences. It also allows two people to use the same delegate unit as they can pull the microphone towards them when required to speak. Incorporated into the head of the microphone is a light ring which illuminates red to indicate when the microphone is on.

Built-in loudspeaker
Loudspeaker volume is set centrally at the Control Unit for all delegate units. To prevent acoustic feedback, the built-in loudspeaker is automatically muted when the microphone is on.

Two headphone sockets
Two 3.5 mm (0.14 in) stereo headphone sockets (wired for mono) allow two pairs of headphones to be connected so two delegates can simultaneously use the unit. It is also possible to connect a tape recorder to one headphone socket, and use the other headphone socket to listen to the proceedings.

Built-in volume control for headphones
The headphone volume level can be adjusted by means of a thumbwheel on the unit for maximum comfort.

Compact, attractive design
Featuring modern, unobtrusive styling and finished in charcoal gray these units make a valuable addition to any venue.

Standard or Extended Length Microphone Stems
The delegate units are available with standard 313 mm (12.3 in) or extended 488 mm (19.2 in) microphone stem lengths.

Controls and Indicators
- Microphone on/off button
- Rotary volume control for adjusting headphone volume
- Loudspeaker, automatically muted when microphone is on and/or headphones are connected
- Possible-To-Speak indicator (white LED)
- Microphone ‘on’ indicator (red LED)
- Light ring indicator on microphone stem, lights up red when microphone is on

Interconnections
- 1 x 2 m (78.7 in) cable terminated with a 7-pole male connector for loop-through connection to other delegate or chairman units, or to a Control Unit
- 1 x 7-pole circular female connector for loop-through connection to other delegate or chairman units
- 2 x 3.5 mm (0.14 in) stereo headphone sockets

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Mechanical

Dimensions unit without microphone (H x W x D)	71 x 220 x 140 mm (2.8 x 8.7 x 5.5 in)	
Height with microphone in horizontal position	134 mm (5.3 in)	
Length of microphone from mounting surface	CCS-DS	CCS-DL
	313 mm (12.3 in)	488 mm (19.2 in)
Weight	approx. 1 kg (2.2 lb)	
Mounting	tabletop (portable or fixed)	
Material (top)	polymer	
Material (base)	painted metal	
Color (top)	charcoal (PH10736)	
Color (base)	charcoal (PH10736)	

Ordering information

CCS-DS CCS Delegate Unit Short Microphone
CCS 900 delegate unit with short microphone, microphone stem length 313 mm (12.3 in).
Order number **CCS-DS**

CCS-DL CCS Delegate Unit Long Microphone
CCS 900 delegate unit with long microphone, microphone stem length 488 mm (19.2 in).
Order number **CCS-DL**

Accessories

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

CCS-CMx CCS Chairman Unit

Features

- Incorporates all functions of the CCS-Dx CCS Delegate Units (with the exception of the Possible-To-Speak functionality/LED)
- Priority button for chairman microphone
- Temporary or permanent muting of delegate microphones
- Optional chime tone facility for preceding chairman announcements
- Modern, unobtrusive styling to match the CCS-Dx CCS Delegate Units

The CCS-CMx CCS Chairman Units are equipped with enhanced functionality that enables the user to take the role of chairman in a conference or meeting.

Functions

Priority button for chairman microphone
In addition to the 'microphone on' button the chairman units feature a 'chairman priority' button. When pressed the priority button causes all currently active delegate microphones to be temporarily or permanently muted.

Temporary or permanent muting of delegate microphones
The 'chairman priority' button can be set to mute delegate microphones on a temporary or permanent basis. On the temporary setting, delegate microphones are muted only as-long as the chairman has the priority button pressed down. On the permanent setting delegates must reactivate their microphone after a 'chairman priority' announcement by pressing the 'microphone on' button on their delegate unit. Activation of the permanent mute option is carried out by setting an internal switch, which can be accessed by removing a small plastic plate on the base of the chairman unit.

Optional chime tone facility for preceding chairman announcements
An optional chime tone can be selected to precede chairman priority calls. Activate the chime tone option by setting an internal switch; this can be accessed by removing a small plastic plate on the base of the chairman unit.

Standard or extended length microphone stems
The chairman units are available with standard 313 mm (12.3 in) or extended 488 mm (19.2 in) microphone stem lengths.

Controls and Indicators
- Microphone on/off button
- Chairman priority button
- Rotary volume control for adjusting headphone volume
- Loudspeaker, automatically muted when microphone is on and/or headphones are connected
- Internal switch for selection of chairman announcement chime tone
- Internal switch for temporary or permanent muting of delegate microphones when chairman priority button is pressed
- Microphone has 'on' indicator (red LED)
- Light ring indicator on microphone stem, lights up red when microphone is on
- No Possible-To-Speak functionality and indicator is required because a Chairman Unit can always switch-on the microphone, no matter the number of delegates speaking

Interconnections
- 1 x 2 m (78.7 in) cable terminated with a molded 7-pole circular male connector, for loop-through interconnection to delegate unit or Control Unit
- 1 x 7-pole circular female connector for loop-through interconnection to delegate units
- 2 x 3.5 mm (0.14 in) stereo headphone sockets

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Mechanical

Dimensions unit without microphone (H x W x D)	71 x 220 x 140 mm (2.8 x 8.7 x 5.5 in)	
Height with microphone in horizontal position	134 mm (5.3 in)	
Length of microphone from mounting surface	CSS-CMS	CCS-CML
	313 mm (12.3 in)	488 mm (19.2 in)
Weight	approx. 1 kg (2.2 lb)	
Mounting	tabletop (portable or fixed)	
Material (top)	polymer	
Material (base)	painted metal	
Color (base)	charcoal (PH10736)	
Color (top)	charcoal (PH10736)	

Ordering information

CCS-CMS CCS Chairman Unit Short Microphone
CCS 900 chairman unit with short microphone, microphone stem length 313 mm (12.3 in).
Order number **CCS-CMS**

CCS-CML CCS Chairman Unit Long Microphone
CCS 900 chairman unit with long microphone, microphone stem length 488 mm (19.2 in).
Order number **CCS-CML**

Accessories

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

CCS-SC10 Suitcase for 10 Delegate units

Features

- Can hold 10 contribution units and cables
- Attractive, yet sturdy construction
- Interior specially molded to securely hold system units
- Easy to transport and store
- Two separate locks for extra security

The CCS-SC10 CCS Suitcase for 10 Delegate Units is used where CCS 900 Ultro contribution units will not be used in one fixed location and, therefore, have to be easily transportable. This is often the case in town halls, hotels, business centers, local government offices or smaller halls in major conference venues.

Functions

Capacity
The CCS-SC10 is designed to accommodate ten contribution units with standard (short) length microphones. Any combination of delegate/chairman units can be catered for.

Specially shaped interior
The suitcase interior has shaped foam packing to accommodate the discussion units. This gives ample protection and makes packing and unpacking easier.

Easy to transport and store
The suitcase is attractive but also extremely durable and practical. It has handles on the top and side with two wheels on the underside for easy transport. There are two separate locks for extra security.

Technical specifications

Mechanical

Dimensions (H x W x D)	560 x 795 x 235 mm (22.0 x 31.3 x 9.3 in)
Weight (empty)	6 kg (13.2 lb)
Material (body)	3 mm (0.12 in) ABS
Material (rim)	aluminum
Color (body)	black (RAL9004)
Color (rim)	silver

Ordering information

CCS-SC10 Suitcase for 10 Delegate units
CCS 900 suitcase for transportation or storage of 10 delegate or chairman units.
Order number **CCS-SC10**

CCS-SC6 Suitcase for Control Unit and 6 Delegate Units

Features

- Can hold CU and/or 6 contribution units and cables
- Attractive, yet sturdy construction
- Interior specially molded to securely hold system units
- Easy to transport and store
- Two separate locks for extra security

The CCS-SC6 is used where CCS 900 Ultro contribution units will not be used in one fixed location and, therefore, have to be easily transportable. This is often the case in town halls, hotels, business centers, local government offices or smaller halls in major conference venues.

Functions

Capacity
The CCS-SC6 can accommodate one CU and up to six contribution units with standard (short) length microphones. Capacity for the storage of several extension cables or other accessories is also provided.

Specially shaped interior
The suitcase interior has shaped foam packing to accommodate the units. This gives ample protection and makes packing and unpacking easier.

Easy to transport and store
The suitcase is attractive but also extremely durable and practical. It has handles on the top and side with two wheels on the underside for easy transport. There are two separate locks for extra security.

Technical specifications

Mechanical

Dimensions (H x W x D)	560 x 795 x 235 mm (22.0 x 31.3 x 9.3 in)
Weight (empty)	6 kg (13.2 lb)
Material (body)	3 mm (0.12 in) ABS
Material (rim)	aluminum
Color (body)	black (RAL9004)
Color (rim)	silver

Ordering information

CCS-SC6 Suitcase for Control Unit and 6 Delegate Units
CCS 900 suitcase for transporting and storing control unit, 6 delegate or chairman units, cables and/or other accessories.
Order number **CCS-SC6**

CCS-CU Control Unit

Features

- Built-in MP3 recording and playback with graphical display
- Patent-pending recording buffer
- Digital Acoustic Feedback Suppression
- Discussion control without operator
- Controls up to 150 contribution devices

The Control Unit (CU) is the heart of the CCS Ultro Discussion System and supplies the power for all delegate and chairman units in the system. The unit also controls the chairman and delegate unit microphones, as well as providing connections for audio inputs and outputs.

Functions

Built-in MP3 recording and playback with graphical display
(CCS-CURD)
The CU has a built-in recorder to digitally record a discussion to an SD Card. The graphical display shows the status of the recorder and the accompanying buttons can be used to configure the recorder. As an option, the recording is only active when a microphone is active. The SD card can be removed from the CU and processed on a PC for transcription purposes; the recordings can also be retrieved by connecting a PC to the CU's USB. The recordings can be played back to the monitor loudspeaker or to delegate's loudspeakers. An audible beep and a flashing LED indicate when the SD Card is almost full and the user needs to replace it with a new card.

Patent-pending recording buffer
(CCS-CURD)
A card can be replaced by an empty card while recording is running. When the full card is removed, the recording is continued to a patent-pending recording buffer. When a new card is inserted into the CU, the buffered recording is written onto the new card and the recording continues normally. This gives seamless recording without the loss of any audio while an SD Card is exchanged.

Digital acoustic feedback suppression
(CCS-CUD, CCS-CURD)
The digital acoustic feedback suppression facility automatically eliminates acoustic feedback (also known as 'howling' or 'Larsen effect'). This gives better speech intelligibility by allowing the speaker volume to be turned up as loud as required without any risk of feedback.

Discussion control without operator
The CU can be setup to operate standalone without the need for an operator. The following 5 modes can be chosen using a rotary control on the unit's top panel:

- Open mode – allows selection of one to four microphones (excluded chairmen microphones) which can be simultaneously active
- Open mode with auto-switch-off – allows selection of one to four microphones (excluded chairmen microphones) which can be simultaneously active. If the delegate does not speak for 30 seconds, microphones are automatically switched off
- Override mode – delegates can override each other simply by activating their microphones. Only one microphone can be active at any one time. (Note: In override mode, delegates cannot override chairmen)
- Chairman only mode – only chairmen can speak. Delegate microphones cannot be activated, even when a chairman is not speaking
- Test mode –checks if system connections are correct. All microphone light rings and contribution unit LEDs light up to indicate that units are properly connected

Supplies power for up to 50 contribution units
The CU has two trunk outputs for the loop-through connection of contribution units. It is possible to connect 25 contribution units to each trunk output, with a maximum system cable length of 100 m (109.3 yards).

Provides control for up to 150 contribution units
Up to 3 CUs can be used together in a discussion system to power and control a maximum of 150 contribution units. In this configuration a single CU acts as a master controller for the entire system.

Built-in monitor loudspeaker
The built-in monitor loudspeaker and headphone socket allow the conference to be monitored.

Interfaces the system with external equipment
The following equipment can be interfaced to the CCS Ultro Discussion System through the CU:

- External wired or wireless microphone – for guest speakers or audience participation. (Note: The external microphone is muted when the priority button on a chairman unit is pressed, and when the system is operating in 'chairman only' mode)
- External PA system – for transmitting the proceedings to an audience in the same room or an adjacent room
- Tape recorder – for external recording and playing back meetings and discussions
- Audio equipment – for providing background music
- Telephone coupler – to allow a remote delegate to participate via telephone
- External audio processing – an insertion connector is provided

Controls and Indicators

Top

- Mains on/off switch
- Graphical display for status information (CCS-CURD)
- 5 soft buttons for configuration and control of the built-in MP3 recorder (CCS-CURD)
- Loudspeaker volume control, for setting output level of loudspeakers of contribution units. This control also determines the maximum level for the headphone outputs of the contribution units and the CU.
- Microphone mode rotary switch, for setting the number of simultaneously active microphones, and selecting one of the four operation modes (plus test mode)
- Power on LED

Back

- On/off switch for digital acoustic feedback suppression facility (CCS-CUD, CCS-CURD)
- Microphone input gain adjustment
- External recorder input gain adjustment
- Insertion connector bypass switch

Interconnections

Top

- 1 x 3.5 mm (0.14 inch) stereo headphone socket

Back

- 1 x AC input
- 2 x 7-pole circular female connectors, trunk in/out loop through interconnection
- 1 x 3-pole female XLR connector, microphone input (can be used as line input by included 50dB attenuator)
- 1 x Cinch connector pair, line input/output
- 1 x Cinch connector pair, telephone input/output
- 1 x Cinch connector pair, insertion input/output
- 2 x Cinch connector pairs (R/L channel), external recorder input/output
- USB interface (CCS-CURD)

1	CCS-CUD, CCS-CURD
2	CCS-CURD

Parts included

Quant.	Component
1	Control Unit
1	50 dB Attenuator
1	User manual
1	Power cord

Technical specifications

Electrical

Mains voltage	100 to 240 VAC ± 10 %
Current consumption	maximum 0.9 A (100 VAC) to 0.3 A (240 VAC)
DC supply to contribution units	24 V ± 1 V (current limited)
Loudspeaker volume control	mute (50 dB att.) + 10 steps of 1.9 dB
Limiter threshold level to unit	10 dB above nominal level loudspeaker / headphone
Gain reduction due to number of open microphones (NOM)	÷ NOM ± 1 dB
Total harmonics	
Nominal input (85 dB SPL)	< 0.5
Max. input (110 dB SPL)	< 0.5

Sample frequency (CCS-CURD)

Recording	32 kHz
Playback	32, 44.1, 48 kHz

Bit rate (CCS-CURD)

Recording	64, 96, 128, 192, 256 KBit/sec
Playback	any bitrate

Compatible conform ID3V2 mp3-tags (CCS-CURD)

Memory card	Any SD Card up to 2 Gb (high speed cards advised)

Recording capacity (CCS-CURD)

	Internal memory	Card size		
Bit rate	225 MB	512 MB	1 GB	2 GB
64	07 h : 41 m	17 h : 14 m	34 h : 28 m	64 h : 56 m
96	05 h : 07 m	11 h : 29 m	22 h : 59 m	45 h : 58 m
128	03 h : 50 m	08 h : 37 m	17 h : 14 m	34 h : 28 m
192	02 h : 33 m	05 h : 44 m	11 h : 29 m	22 h : 58 m
256	01 h : 55 m	04 h : 18 m	08 h : 37 m	17 h : 14 m

Mechanical

Dimensions including feet (H x W x D)	84 x 361 x 143 mm (3.4 x 14.2 x 5.6 in)
Height of feet	5.5 mm (0.22 in)

Mounting	tabletop (portable or fixed) 19-inch rack flush mounting
Weight	1.5 kg (3.3 lb)
Material (top)	polymer
Material (base)	painted metal
Color (top)	charcoal (PH10736)
Color (base)	black (PH80007)

Ordering information

CCS-CU Control Unit
CCS 900 control unit, supplies power for all delegate and chairman units in the system, as well as the unit microphones, provides connections for the audio inputs and outputs.
Order number **CCS-CU**

CCS-CUD Control Unit with DAFS
CCS 900 control unit with the DAFS (Digital Acoustic Feedback Suppression) facility, supplies the power for all delegate and chairman units in the system, as well as the unit microphones, provides connections for the audio inputs and outputs.
Order number **CCS-CUD**

CCS-CURD Control Unit with Recorder and DAFS
CCS 900 Control Unit with recorder and DAFS, built-in recorder, graphical-display, recording buffer, and acoustic feedback suppression facility, supplies power for all units, provides connections for the audio inputs and outputs.
Order number **CCS-CURD**

CCS-CU-US Control Unit (US)
CCS 900 control unit, supplies power for all delegate and chairman units in the system, as well as the unit microphones, provides connections for the audio inputs and outputs. US version.
Order number **CCS-CU-US**

CCS-CUD-US Control Unit with DAFS (US)
CCS 900 control unit with the DAFS (Digital Acoustic Feedback Suppression) facility, supplies power for all units in the system, as well as the unit microphones, provides connections for the audio inputs and outputs. US version.
Order number **CCS-CUD-US**

CCS-CURD-US Control Unit with Recorder and DAFS (US)
CCS 900 Control Unit with recorder and DAFS, built-in recorder, graphical-display, recording buffer and acoustic feedback suppression facility, supplies power for all units, provides connections for the audio inputs and outputs. US version.
Order number **CCS-CURD-US**

LBB 3311/00 CCS Rack Mounting Set

The LBB 3311/00 19-inch rack mounting set is a set of brackets and other necessary fixings to mount a Control Unit into a 19-inch rack system.

Technical specifications

Mechanical

Material	metal
Color	charcoal (PH10736)

Ordering information

LBB 3311/00 CCS Rack Mounting Set
CCS 900 rack-mounting set with brackets and other necessary fixings for mounting a control unit into a 19-inch rack system.
Order number **LBB3311/00**

LBB 3316/00 CCS Installation Cable 100m

A 100 m (328 ft) length of installation cable plus 10 connector sets (5 male and 5 female).

Certifications and approvals

Region	Certification
Europe	CE

Parts included

Quantity	Component
1x	Installation cable, length 100 m (328 ft)
5x	Connector sets, male and female

Technical specifications

Mechanical

Length	100 m (328 ft)
Diameter	5.9 ± 0.3 mm (0.23 ± 0.01 in)
Insulation material	PVC
Color	grey

Ordering information

LBB 3316/00 CCS Installation Cable 100m
CCS 900 installation cable, 100 m (328 ft), includes 5 male and 5 female connector sets.
Order number **LBB3316/00**

LBB 3316/xx CCS Extension Cable

Extension cables for contribution unit / Control Unit interconnection. These cables provide additional system flexibility in larger application sites.

Functions

Interconnections

- 1 x 7-pole male DIN connector
- 1 x 7-pole female DIN connector

Technical specifications

Mechanical

Length	LBB 3316/05 5 m (16.4 ft)	LBB 3316/10 10 m (32.8 ft)
Diameter	5.9 ± 0.3 mm (0.23 ± 0.01 in)	
Material	PVC	
Color	grey	
Connector material	molded plastic	
Connector color	grey	

Ordering information

LBB 3316/05 CCS Extension Cable 5m
CCS 900 extension cable, 5 m (16.4 ft), 7-pole male and female DIN connectors.
Order number **LBB3316/05**

LBB 3316/10 CCS Extension Cable 10m
CCS 900 extension cable, 10 m (32.8 ft), 7-pole male and female DIN connectors.
Order number **LBB3316/10**

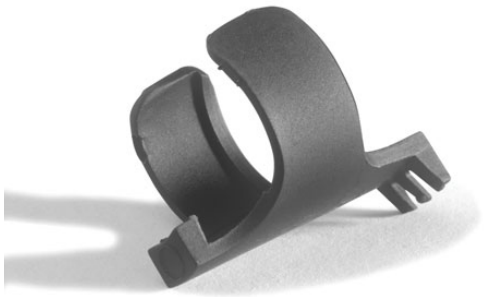
LBB 4117/00 DCN Cable Locking Clamp (25 pcs)

Matching clamps for male/female cable connectors such as those on the DCN Extension Cable (LBB 4416). One clamp per male/ female connector required.

Ordering information

LBB 4117/00 DCN Cable Locking Clamp (25 pcs)
DCN Next Generation cable-locking clamp, set of 25 pieces.
Order number **LBB4117/00**

DCN-DISCLM Cable Clamp (25 pcs)



The cables can be secured to the DCN-CCU2 trunk outputs using the DCN-DISCLM cable clamp to prevent them from being pulled out accidentally.

Technical specifications

Mechanical

Mounting	Click and fit on any Discussion unit
Color	Charcoal (PH 10736)

Ordering information

DCN-DISCLM Cable Clamp (25 pcs)
DCN Next Generation cable clamps (25 pieces).
Order number **DCN-DISCLM**

LBB 3443 Lightweight Headphones

Features

- Lightweight with high quality sound reproduction
- Replaceable ear pads
- Available with normal or durable cable
- Separate available solid washable ear pads
- Right-angled gold-plated jack plug

Functions

These headphones can be fitted with an optional set of washable ear pads.

Washable ear pads

Interconnections

- 1.3 m (4.25 ft) cable terminated with gold-plated 3.5 mm (0.14 in) angled stereo jack plug

Technical specifications

Electrical

Impedance	32 ohm per earpiece
Audio frequency response	50 Hz to 20 kHz (-10 dB)
Power handling capacity	50 mW
Sensitivity (1 kHz)	98 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	70 g (0.16 lb)
Finish	Charcoal (PH 10736) with silver

Ordering information

LBB 3443/00 Lightweight Headphones
Lightweight headphones for high-quality sound reproduction, replaceable ear pads and normal cable.
Order number **LBB3443/00**

LBB 3443/10 Lightweight Headphones Durable Cable
Lightweight headphones for high-quality sound reproduction, replaceable ear pads and durable cable.
Order number **LBB3443/10**

Accessories

LBB 3443/50 Foam Ear Pads for LBB 3443 (50 pairs)
Replacement foam ear pads for LBB 3443 (50 pairs).
Order number **LBB3443/50**

HDP-LWSP Solid Ear Pads for LBB 3443 (50 pairs)
Replacement, washable solid ear pads for LBB 3443 (50 pairs).
Order number **HDP-LWSP**

HDP-LWN Lightweight Neckband Headphone

Features

- Comfortable neckband stereo headphone
- Lightweight with high quality sound reproduction
- Replaceable ear pads
- Right-angled stereo gold-plated jack plug

Functions

Interconnections

- 1.3 m (4.25 ft) cable terminated with gold-plated 3.5 mm (0.14 in) right-angled stereo gold-plated jack plug

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	32 ohm per earpiece
Audio frequency response	20 Hz to 20 kHz (± 3 dB)
Power handling capacity	30 mW
Sensitivity (1 kHz)	111 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	56 g (0.12 lb)
Finish	Charcoal (PH 10736) with silver

Ordering information

HDP-LWN Lightweight Neckband Headphone
Lightweight neckband headphones for high-quality sound reproduction, replaceable ear pads.
Order number **HDP-LWN**

Accessories

HDP-LWNEP Earpads for neckband headphone (50 pairs)
Replacement ear pads for neckband headphones, 50 pairs.
Order number **HDP-LWNEP**

LBB 3442/00 Single Earphone

Features

- Lightweight single earphone
- Left or right ear use
- Right-angled gold-plated jack plug

Functions

Interconnections

- 1.2 m (3.94 ft) cable terminated with 3.5 mm (0.14 in) jack plug

Technical specifications

Electrical

Impedance	32 ohm
Audio frequency response	100 Hz to 5 kHz (-10 dB)
Power handling capacity	5 mW
Sensitivity (1 kHz)	114 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	25 g (0.06 lb)
Color	Dark grey

Ordering information

LBB 3442/00 Single Earphone
Lightweight single earphone, 1.2 m (3.94 ft) cable, terminated with 3.5 mm (0.14 in) right-angled mono gold-plated jack plug.
Order number **LBB3442/00**

LBB 3441/10 Under the Chin Headphones

Features

- Lightweight stereo headphones
- Ergonomic design for use under the chin
- Replaceable ear tips
- Right-angled, gold-plated stereo jack plug

Functions

Interconnections

- 1.2 m (4 ft) cable terminated with 3.5 mm (0.14 in) right-angled gold-plated stereo jack plug.

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	150 ohm per earpiece
Audio frequency response	50 Hz to 5 kHz (-10 dB)
Power handling capacity	60 mW
Sensitivity (1 kHz)	107 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	33 g (0.07 lb)
Color	Black

Ordering information

LBB 3441/10 Under the Chin Headphones
Under the chin headphones with 1.2 m (4 ft) cable, terminated with 3.5 mm (0.14 in) right-angled gold-plated stereo jack plug.
Order number **LBB3441/10**

Accessories

LBB 3441/50 Ear Tips for LBB 3441 (500 pairs)
Replacement ear tips for LBB 3441 (500 pairs).
Order number **LBB3441/50**

LBB 3015/04 High Quality Dynamic Headphones

Features

- Durable, dynamic headphones
- Replaceable ear pads
- High-quality sound reproduction
- Gold-plated stereo jack plug

Functions

Interconnections

- 1.5 m (5 ft) cable terminated with a 3.5 mm (0.14 in) stereo jack plug

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	720 ohm per earpiece
Audio frequency response	250 Hz to 13 kHz (-10 dB)
Power handling capacity	200 mW
Sensitivity (1 kHz)	
97 dB SPL/earpiece at 0 dBV/system	
96 dB SPL/earpiece at 1 mW/earpiece	

Mechanical

Weight	110 g (0.24 lb)
Color	Dark grey

Ordering information

LBB 3015/04 High Quality Dynamic Headphones
High quality dynamic headphone.
Order number **LBB3015/04**

Accessories

LBB 9095/50 Ear pads for LBB 3015 LBB 9095 (25 pairs)
Replacement ear pads for LBB 3015 LBB 9095 (25 pairs).
Order number **LBB9095/50**

3

HDP-ILN Induction Loop Neckband

Features

- Lightweight
- Used with ‘T-coil’ hearing aids
- Gold-plated jack plug

Functions

This induction loop neckband can be used with:
- Integrus receivers
- CCS900 unit
- DCN unit

The neckband magnetically couples the sound signal from the headphone output to a ‘T-coil’ hearing aid.

Interconnections
- 0.9 m (3ft) cable terminated with a 3.5 mm (0.14 in) gold-plated jack plug.

Technical specifications

Mechanical

Weight	45 g (0.10 lb)
Color	Charcoal with silver

Ordering information

HDP-ILN Induction Loop Neckband
Induction loop neckband, lightweight.
Order number **HDP-ILN**

LBB 9600/20 Condenser Handheld Microphone

Features

- Condenser transducer
- Unidirectional
- High speech intelligibility
- Low sensitivity to case noise and vibrations
- Phantom powered

This condenser microphone is based on an electric transducer element in a sturdy housing with shielding against wind and wind bursts (pops). It is intended for public address and sound reinforcement applications, such as in churches, theaters, and conference centers.

Functions

The handheld LBB 9600/20 is an excellent microphone with almost frequency independent, unidirectional directivity. Its low equivalent input noise level and insensitivity to stray electrostatic and electromagnetic fields keep the audio signal free from spurious noise.

The microphone has an on/off slide-switch and a 3-pin, lockable XLR plug. It uses a phantom power supply, which is available on all microphone inputs on Bosch public address amplifiers.

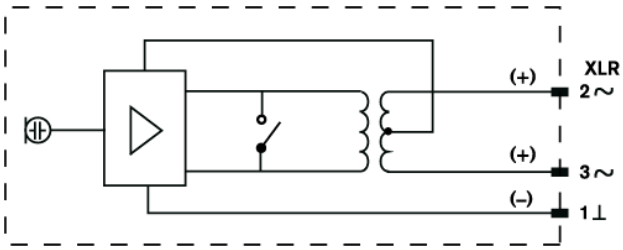
It comes with a push-on clip with a Whitworth-threaded screw fitting, and a multi-thread adaptor (3/8", ½", and 5/8") for mounting. The supplied 7 m (23 ft) connection cable has 3-pin, lockable male and female XLR connectors.

Accessories
A number of accessories, such as extension cables, table stands and floor stands are also available. See the separate microphone accessories data sheet.

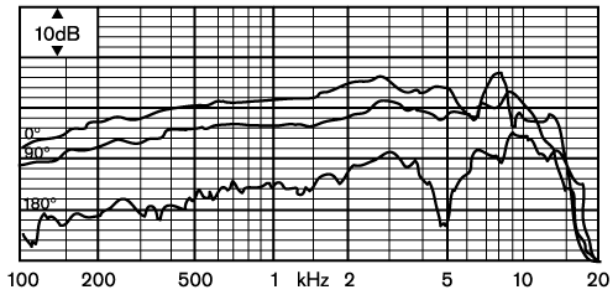
Certifications and approvals

Region	Certification	
Europe	CE	Declaration of Conformity

Installation/configuration notes



Circuit diagram



Frequency response

Technical specifications

Electrical*

Phantom power supply	
Voltage range	11 V to 52 V (acc. to DIN 45596 and IEC 268-15A)
Current consumption	<1.5 mA
Performance	
Polar pattern	Unidirectional
Frequency range	100 Hz to 16 kHz
Sensitivity	2 mV/Pa +/--3 dB (-54 dB rel. to 1 V/Pa)
Rated output impedance	200 ohm
Equivalent input noise level	26 dB (A)

* Technical performance data acc. to IEC 60268-4

Mechanical

Dimensions (D x L)	54 x 170 mm (2.13 x 6.69 in)
Weight	245 g (8.64 oz)
Color	Black
Switch	On/off slide
Cable type	
Cable length	7 m (23 ft)
Connector	3-pin XLR (male)

Environmental

Operating temperature	-20 °C to +55 °C (-4 °F to +131 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%

Ordering information

LBB 9600/20 Condenser Handheld Microphone
Condenser hand-held microphone, unidirectional, matt-black finish, on/off switch, supplied with 7 m (23 ft) cable, 3-pin lockable male and female XLR connectors.
Order number **LBB9600/20**

Accessories

LBC 1221/01 Floor Stand
Microphone floor stand, three folding legs, matt black, adjustable length from 850 to 1600 mm (2.79 to 5.25 ft) with twist clamp, threaded connector 3/8" Whitworth.
Order number **LBC1221/01**

LBC 1226/01 Adjustable Boom
Microphone boom arm, matt black, maximum reach 670 mm (2.12 ft), length 840 mm (2.76 ft), fits onto 3/8' Whitworth threaded microphone stands.
Order number **LBC1226/01**

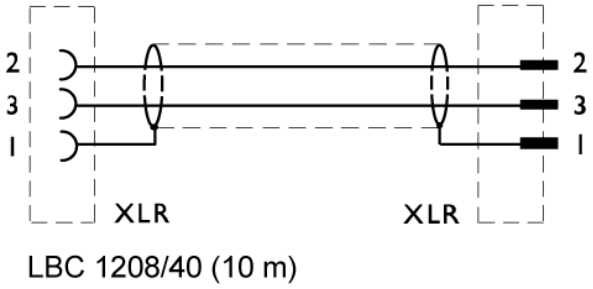
LBC 1227/01 Table Stand
Table microphone stand, matt black, heavy round cast-iron base, 130 mm (5.12 in) diameter with shock-absorbing rubber insert under surface, with 3/8” Whitworth stud.
Order number **LBC1227/01**

LBC 1208/40 Microphone Cable

Features

- 10 m (32.8 ft) extension cable
- Twin-core screened cable
- Three-pole lockable male and female XLR connectors (metal)

System overview



LBC 1208/40 (10 m)

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Mechanical

Length	10 m (32.8 ft)
Weight	420 g (1.13 lb)
Color	black

Ordering information

LBC 1208/40 Microphone Cable
Microphone connection/extension cable, 3-pin XLR, 10 m (32.8 ft).
Order number **LBC1208/40**

LBC 1226/01 Adjustable Boom

Features

- Adjustable in reach and angle (quick-release screw clamp)
- Maximum reach of 670 mm (2.12 ft)
- Fits onto 3/8" Whitworth thread

Technical specifications

Mechanical

Length	840 mm (2.76 ft)
Weight	700 g (1.88 lb)
Color	matt black

Ordering information

LBC 1226/01 Adjustable Boom
Microphone boom arm, matt black, maximum reach 670 mm (2.12 ft), length 840 mm (2.76 ft), fits onto 3/8' Whitworth threaded microphone stands.
Order number **LBC1226/01**

Accessories

LBC 1221/01 Floor Stand
Microphone floor stand, three folding legs, matt black, adjustable length from 850 to 1600 mm (2.79 to 5.25 ft) with twist clamp, threaded connector 3/8" Whitworth.
Order number **LBC1221/01**

LBC 1221/01 Floor Stand

Features

- Adjustable from 850 to 1600 mm (2.79 to 5.25 ft) with twist clamp
- Three folding legs (360 mm; 1.18 ft) for stability
- Column terminates in male 3/8" Whitworth thread

Technical specifications

Mechanical

Dimensions (folded)	850 x 110 mm (33.46 x 5.25 in)
Weight	2.4 kg (6.43 lb)
Color	matt black

Ordering information

LBC 1221/01 Floor Stand
Microphone floor stand, three folding legs, matt black, adjustable length from 850 to 1600 mm (2.79 to 5.25 ft) with twist clamp, threaded connector 3/8" Whitworth.
Order number **LBC1221/01**

Accessories

LBC 1226/01 Adjustable Boom
Microphone boom arm, matt black, maximum reach 670 mm (2.12 ft), length 840 mm (2.76 ft), fits onto 3/8' Whitworth threaded microphone stands.
Order number **LBC1226/01**

LBC 1227/01 Table Stand

Features

- Heavy-duty table stand
- 3/8" Whitworth stud
- Shock-absorbing under surface

Technical specifications

Mechanical

Diameter	130 mm (5.12 in)
Weight	995 g (2.66 lb)
Color	matt black

Ordering information

LBC 1227/01 Table Stand
Table microphone stand, matt black, heavy round cast-iron base, 130 mm (5.12 in) diameter with shock-absorbing rubber insert under surface, with 3/8” Whitworth stud.
Order number **LBC1227/01**

Architect and Engineering Specifications

1. CONTROL EQUIPMENT

Control Unit with recording and digital acoustic feedback suppression

The CU shall have a built-in recorder to digitally record a discussion to any type of SD Card. The graphical display shall show the status of the recorder and the accompanying buttons shall be used to configure the recorder. As an option, the recording shall only be active when a microphone is active.

The SD Card shall be removable from the CU and shall be possible to process on a PC for transcription purposes; the recordings shall also be retrievable by connecting a PC to the CU's USB. The recordings shall be playable back to the monitor loudspeaker or to delegate's loudspeakers. An audible beep and a flashing LED shall indicate when the SD Card is almost full and the user needs to replace it with a new card.
During recording it shall be possible to exchange an SD card without the loss of any recorded audio.
The Control Unit (CU) shall have an incorporated digital acoustic feedback suppression facility based on pre-active algorithms (feedback is not heard). Other included features for managing the number of active microphones and determining the operating mode, without the need for a central operator, should be available.
It shall be possible to connect external equipment to extend the system capabilities. There shall be a built-in loudspeaker and headphone connector to allow the conference to be monitored by, for example, a stenographer. It shall interface the following equipment to the discussion system:

- Tape recorder - for recording and playing back meetings and discussions
- External PA system - for transmitting the proceedings to an audience in the same room or an adjacent room
- External wired or wireless microphone - for use by guest speakers or for audience participation. Note: The external microphone shall be muted when the priority button on a chairman unit is pressed, and when the system is operating in 'chairman only' mode
- Audio equipment - for providing background music
- Telephone/video coupler - for allowing a remote delegate to take part via a telephone/video connection

The following five modes shall be selectable using a rotary control on the unit's front panel:

- Open mode with auto-switch-off - shall allow selection of the number of microphones, from one to four, which can be simultaneously active. If the delegate does not speak for 30 seconds, the microphone shall automatically be switched off. It shall also be possible to switch microphones off manually
- Open mode without auto-switch-off - shall allow selection of the number of microphones, from one to four, which can be simultaneously active
- Override mode - shall allow delegates to override each other simply by activating their microphones. It shall only be possible for one microphone to be active at any one time. Note: In override mode, delegates shall not be able to override chairmen
- Chairman only mode - shall only allow chairmen to speak. It shall not be possible to activate delegates' microphones, even if no chairman is speaking
- Test mode - shall be used to check that the system connections have been made correctly. All microphone ring and contribution unit LEDs shall light up if the unit is properly connected

The CU shall have the following controls and indicators:

- Mains on/off switch
- Microphone-mode switch for selecting one of four modes (plus test mode)
- Rotary loudspeaker volume control for setting the output level of loudspeakers of contribution units. This control shall also determine the maximum level for the headphone outputs of contribution units and CU
- Monitoring volume control of CPSU loudspeaker or headphones
- 'Power on' green LED indicator

It shall provide the following facilities:

- Control for 150 units
- Mains input connection
- Two trunk outputs for loop-through connection of contribution units. It shall be possible to connect 25 contribution units to each output. The maximum cable length shall be not longer than 100 m (109.3 yards). 150 contribution units can be connected in one system
- Microphone input with gain adjustment for connecting an external microphone
- Recorder input and output with gain control
- Line input and output for connecting a PA system or background music source
- Telephone coupler input and output for connecting a telephone line. The input signal shall be isolated from the output to prevent echoing
- Insertion connector (with by-pass switch) for connecting external audio processors
- One 3.5 mm (0.1 in) stereo headphone socket
- On/off switch for digital acoustic feedback suppression facility

It shall be suitable for use in portable or fixed mountings. It shall be 84 mm (3.4 in) high, 361 mm (14.2 in) wide and 143 mm (5.6 in) deep.

Control Unit with recording

This unit is identical but without digital acoustic feedback suppression facility.

Control Unit with digital acoustic feedback suppression

This unit is identical but without recording.

Control Unit

This unit is identical but without recording and without digital acoustic feedback suppression facility.

19-Inch Rack-Mounting Set
This set shall consist of brackets and other necessary fixings to enable the CU to be mounted in a 19-inch rack system. Flush mounting of the CU shall be possible by using a custom-made bracket.

2. CONTRIBUTION EQUIPMENT

Delegate Unit
The Delegate Unit shall enable delegates to speak and listen to the proceedings via a loudspeaker or headphones. The unit shall include a microphone with a red indicator ring, which shall illuminate when the microphone is on. The unit shall include a 'Possible-To-Speak' white LED indicator, which shall illuminate showing the delegate when it is possible to switch on the microphone. To prevent acoustic feedback, the built-in loudspeaker shall be muted when the microphone is on, and/or the headphones are connected. Two 3.5 mm stereo headphone sockets (wired for mono) shall allow two pairs of headphones to be connected, enabling two delegates to simultaneously use the unit. The headphone volume level shall be adjustable on the unit for maximum comfort. It shall also be possible to connect a tape recorder to one headphone socket, and use the other headphone socket to listen to the proceedings. The unit shall have the following controls and indicators:

- 'Possible-To-Speak indicator' (white LED)
- Microphone with light-ring indicator which illuminates when the microphone is on
- Microphone on/off button
- 'Microphone on' indicator (red LED)
- Rotary volume control for adjusting headphone volume
- Loudspeaker, automatically muted when microphone is on and/or headphones are connected

Each unit shall have a 2 m (78.7 in) cable terminated with a molded 7-pole circular connector, and a 7-pole circular socket for loop-through connections. There shall be two 3.5 mm (0.1 in) stereo jack headphone sockets. The front panel shall be 71 mm (2.8 in) high and 220 mm (8.7 in) wide, and the unit footprint shall be 220 mm (8.7 in) x 140 mm (5.5 in). The weight of the unit shall be approximately 1 kg (2.2 lb). The stem length of the microphone shall be 313 mm (12.3 in) or 488 mm (19.2 in)

Chairman Unit
The Chairman Unit shall enable the user to function as chairman of a conference or meeting. It shall be similar in appearance to the Delegate Unit, and shall also include a 'chairman priority' button. When pressed, the priority button shall cause all currently active delegate microphones to be temporarily or permanently muted, allowing the chairman to take control of the meeting. To prevent acoustic feedback, the built-in loudspeaker shall be muted when the microphone is on, and/or the headphones are connected. An optional chime shall be selectable to precede chairman priority calls. The unit shall have the following controls and indicators:

- Chairman priority button
- Microphone on/off button
- Rotary volume control for adjusting headphone volume
- Microphone with light-ring indicator which illuminates when the microphone is on
- 'Microphone on' indicator (red LED)
- Internal chime selection switch (see Note)
- Internal switch (see Note) for temporary or permanent muting of delegate microphones when chairman priority key is pressed
- Loudspeaker, automatically muted when microphone is on and/or headphones are connected

Notice
Both internal switches shall be accessible by first removing a small plastic plate on the bottom of the Chairman Unit. If any Delegate Unit is permanently muted on activation of a 'microphone priority' key, it shall be possible to reactivate it using the 'microphone on' button on the Delegate Unit.

Each unit shall have a 2 m (78.7 in) cable terminated with a molded 7-pole circular connector, and a 7-pole circular socket for loop-through connections. There shall be two 3.5 mm (0.1 in) stereo jack headphone sockets. The front panel shall be 71 mm (2.8 in) high and 220 mm (8.7 in) wide, and the unit footprint shall be 220 mm (8.7 in) x 140 mm (5.5 in). The weight of the unit shall be approximately 1 kg (2.2 lb). The stem length of the microphone shall be 313 mm (12.3 in) or 488 mm (19.2 in).

Suitcase for 10 contribution units
The transport and storage suitcase shall be used to protect contribution units in transit or while in storage. It shall have the capacity to hold 10 contribution units with standard-length microphones. Any combination of delegate/ chairman units shall be catered for. The inside of the suitcase shall have specially molded packing to accommodate the discussion units, which shall give ample protection, while making packing and unpacking easier. The suitcase shall have handles on the top and side, and two wheels on the underside for ease of transportation. There shall be two separate locks for extra security. The suitcase shall be 560 mm (22.0 in) high, 795 mm (31.3 in) wide and 235 mm (9.2 in) deep. The weight of the empty suitcase shall be 6 kg (13.2 lb). The material used shall be 3 mm (0.12 in) thick ABS. The color shall be RAL 9004 (black).

Suitcase for CU and 6 contribution units
This suitcase shall be functionally identical to the Transport and Storage Suitcase for 10 contribution units, except that it shall have the capacity to hold one CU and six contribution units with standard microphone stems, and some extension cables. The suitcase shall be 560 mm (22.0 in) high, 795 mm (31.3 in) wide and 235 mm (9.2 in) deep. The weight of the suitcase shall be 6 kg (13.2 lb). The material used shall be 3 mm (0.12 in) thick ABS. The color shall be RAL 9004 (black).

Extension Cable Assembly
The extension cable assembly shall consist of 5 m (197 in) and 10 m (394 in) of 6 mm (0.24 in) diameter cable terminated at one end with a molded 7-pole male circular connector, and at the other end with a molded 7-pole female circular connector. The installation cable shall consist of 100 m (3940 in) of 6 mm (0.24 in) diameter cable plus 5 connector sets, male & female (7-pole circular).

Set of 25 Cable Locking Clamps
A set of Cable Locking Clamps shall match male and female cable connectors, such as those on Extension Cable Assemblies. Each male/female connector shall require one clamp.

Cable Clamp
The Cable Clamp shall secure loop-through cables to the next discussion unit to prevent disconnection. Each male/female connector shall require one cable lock clamp.

Integrus - Wireless Language Distribution System

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Introduction

Simultaneous Interpretation
For international conferences with multiple languages, it is obviously of utmost importance that all participants can understand what is being said. That is why a system which enables interpreters to simultaneously interpret the speaker's language is almost indispensable. The interpretations created are then distributed throughout the conference venue, so delegates can select their language of choice and listen to it through headphones.

Infrared Distribution
The most effective method of distributing the interpretations is by using an infrared language distribution system. Infrared means wireless, so delegates have total freedom of movement. It means information integrity, because distributed signals cannot pass beyond the conference hall. And now, with the Bosch Integrus system, it means better than ever audio quality, with no interference from hall lighting.
In simple terms, an infrared distribution system consists of a transmitter, one or more radiators and a number of pocket receivers. Various accessories are also available, such as headphones, cables and battery chargers.
The transmitter is the central element in the Integrus system. It accepts inputs from either analog or digital sources, modulates these signals on to carrier waves, then transmits the waves to radiators located elsewhere in the room. The transmitter accommodates special interface modules to ensure compatibility with these external signal sources. Depending on the transmitter model, up to 32 separate channels can be transmitted simultaneously.
The output of the radiators is intensity-modulated infrared radiation. Each delegate is supplied with a pocket receiver, which has a lens to collect the infrared signal and direct it to a sensor. These signals are then decoded back into interpretation languages, which are chosen by delegates using a channel selector and passed to the delegate's headphones.

Advanced Digital Technology
The Integrus language distribution system incorporates unique, specially-developed Bosch Ir-Digital technology that is characterized by a number of features:

- The Integrus conforms to IEC 61603, part 7. This is the industry standard for digital infrared transmission for language distribution
- The use of the 2-8 MHz frequency band eliminates disturbance from all types of lighting systems
- Error correction by means of a Reed Solomon coder, plus the bit error rate threshold, ensures a high audio quality
- The digital transmission protocol used allows additional information to be sent (e.g. synchronization of the number of channels in use)
- The application of digital technology results in a very high sound quality with a signal/noise ratio of 80 dB

Some of the advantages of this new technology are described in more detail below.

Characteristics of Infrared Distribution
Infrared radiation is an ideal medium for audio distribution. It is invisible to the human eye and can carry multiple channels, each with a separate language, over relatively large distances. And, above all, it is a wireless distribution system, so conference participants can receive interpretations without being physically connected to the system.

Freedom of Movement for Delegates
With an infrared system, delegates have great freedom in movement throughout the conference room. As the interpretations are transmitted through the air, there is no physical connection to the system, so the only limitations are the walls of the venue itself. The pocket receivers used by delegates to pick up interpretations are lightweight, portable and unobtrusive, and can be easily slipped into a shirt or jacket pocket.

Conference Hall Privacy
Conferences can often involve discussion of sensitive information, where it is important that any audio distribution does not compromise security. As infrared radiation is unable to pass through opaque structures such as walls, the conference venue itself acts as a barrier to infrared radiation escaping and being overheard.

Language Distribution in Adjacent Halls
Infrared systems are ideally-suited for conference centers with a number of separate halls. Since walls are opaque to infrared radiation, there is no interference between separate conferences.

No Interference from Lighting Systems
One of the limitations of traditional infrared language distribution systems was interference from lighting. The problem was particularly acute with newer (fluorescent) lighting systems, which operate at higher frequencies and therefore cause more interference. The Integrus system has completely solved this problem by using a much higher frequency band – 2 to 8 MHz – for audio distribution.
Freedom from interference from all types of venue lighting brings two major advantages: audio quality is greatly improved, and systems can be used much more easily on a rental basis, because they will be compatible with all types of venue lighting.

Distorted reception (left) with other language distribution systems, and perfect reception (right) with Bosch Integrus system

Audio Quality
The Integrus system offers greatly improved audio quality. Better compression techniques and a higher signal-to-noise ratio means that the received signal is much clearer, and, as mentioned above, there is no interference from lighting systems. Greater intelligibility makes the system less tiring to use over extended periods. Delegates can therefore maintain their concentration more easily during a long conference session.

Number of Channels
The Integrus gives the user real flexibility in choosing the number of required channels. By using a much higher frequency band (2 to 8 MHz) it offers four quality modes:

- Standard-quality mono (for interpretations). Four channels of this quality can be incorporated in a single carrier signal
- Standard quality stereo (for reproduction of music or presentations). Two channels of this quality can be incorporated in a single carrier signal
- Premium-quality mono (with double the bandwidth). Two channels of this quality can be incorporated in a single carrier signal
- Premium-quality stereo (for excellent reproduction of music or presentations). One channel of this quality can be incorporated in a single carrier signal

The Integrus can therefore provide a maximum of 32 standard-quality audio channels (which means up to 31 different interpretations + the floor), more than enough to accommodate even the largest international conferences. It can also be configured for high quality stereo sound, with up to eight different channels available for applications like multimedia presentations or music distribution. Combinations of standard- and premium-quality configuration are also possible.

User-Friendly Channel Selection
The Integrus pocket receivers offer the user the exact amount of channels available. This eliminates having to scroll through unused channels before reaching the required signal. All pocket receivers in the system automatically update themselves if the number of available channels changes.

Installation and Maintenance of the System
The Integrus system is easy to install (installation time is largely determined by the time required to position and align the radiators.) Connection of the transmitters is straightforward and quick. The transmitter has slots for modules that enable interfacing with digital or analogue conference systems. All information regarding installation, configuration and system status is given on the transmitter front-panel display. The display also shows the menu, which allows all system parameters to be set or altered. One easy-to-use button is all that is required to select all menu options.
Circuitry in the transmitter and matching circuitry in the radiators allows effective monitoring of the radiators function. The status of the radiators is indicated on the transmitter display and by LEDs on each radiator. The system is also easy to maintain. Maintenance of the pocket receivers generally involves recharging or replacing the batteries they use.
Once installed, the system can easily be extended to accommodate more conference delegates, simply by adding the required number of extra pocket receivers. The basic system structure will remain the same.

Testing Coverage
The Integrus pocket receivers have an ingenious feature, which allows installers to test the coverage of radiators without the need for measuring equipment. Simply by walking throughout the venue holding a pocket receiver in measuring mode, it is possible to check the coverage at every point. This makes it easy to see whether extra radiators are required or if the positioning of existing ones should be altered.

Integrated Charging Electronics
A breakthrough in technology has made receiver charging more reliable than ever. The process is regulated from the Integrus system IC, although each receiver now has integrated electronics to allow it to manage its own charging process. This ensures optimum charging performance and maximum battery lifetime.

Room Coupling
For distributing interpretations to multiple rooms, the transmitter has a master/slave operation mode. This means that separate (slave) transmitters can be located in the other rooms, providing exactly the same functionality as the master transmitter and providing local outputs for radiators. This removes the need to connect the

radiators required for the additional rooms to one transmitter, which cuts the amount of wiring required and eliminates the risk of capacity overload.

Emergency or Auxiliary Input
To provide delegates with an additional degree of safety and security, the transmitter unit includes an additional auxiliary input which overrides all active audio channels. This auxiliary input allows the immediate distribution of emergency messages to all active channels. The auxiliary input may also be used for the distribution of music or other information.

4

Complete Integration
Integrus integrates seamlessly with the DCN Next Generation and DCN Wireless using an optical network for a maximum 31 different languages, plus floor. Use Integrus with CCS 900 Ultro and the analog 6-channel interpreter desk for perfect reception at smaller meetings. Or easily interface with virtually any other brand of conference system.
For more information, see the relevant data brochures.

Music Distribution and Hearing Assistance
The Integrus offers more than just language (interpretation) distribution. Its flexibility and high audio quality also make it suitable for:

- Music distribution. In places as diverse as fitness centers and factories, it can provide a choice of music for listeners in locations throughout the premises
- High-quality audio distribution. Multi-lingual cinemas can offer different language soundtracks in the same hall
- Hearing assistance. Helps the hard-of-hearing in places like theatres and other public buildings
- Concert halls and life theaters can distribute the amplified sound in high quality to the musicians on stage without interference or risk of feedback
- Distribution of instructions. TV studios can use the system to distribute instructions from the control gallery to the camera men without RF interference
- Tour guide. Canal boats and museums can offer their customers the tour information in their own language with high audio quality
- Provides musicians on stage the audio they require for their performance
- Interpretation schools. Distribution of the floor and the interpretation on respectively the left and right channel for simultaneous listening to the floor and the selected interpretation

Example 1

1	Integrus Pocket Receiver with headphone
2	Integrus Radiator
3	DCN Next Generation Chairman Unit
4	DCN Next Generation Delegate Units
5	Interpreter Desks
6	Microphone
7	Line Array Loudspeakers

Example 2

1	Integrus Pocket Receiver with headphone
2	Integrus Radiator
3	Integrus Transmitter
4	DCN Wireless Chairman Unit
5	DCN Wireless Delegate Units
6	Wireless Access Point
7	Interpreter Desks
8	Line Array Loudspeakers
9	Camera System

System Description and Planning

System overview

Integrus is a system for wireless distribution of audio signals via infrared radiation. It can be used in a simultaneous interpretation system for international conferences where multiple languages are used. To enable all participants to understand the discussion, interpreters simultaneously translate the speaker's language as required. These interpretations are distributed throughout the conference venue, and delegates select the language of their choice and listen to it through headphones.
The Integrus system can also be used for music distribution (mono as well as stereo).

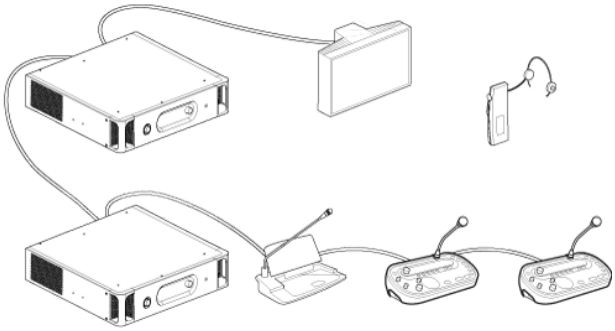


Figure 1: Integrus system overview (with DCN system as input)

The Integrus Digital Infrared Language Distribution System comprises one or more of the following:

Transmitter

The transmitter is the core of the Integrus system. Four types are available:

- INT-TX04 with inputs for 4 audio channels
- INT-TX08 with inputs for 8 audio channels
- INT-TX16 with inputs for 16 audio channels
- INT-TX32 with inputs for 32 audio channels

The transmitter can be directly connected to the DCN Next Generation conference system.

Interface module

LBB 3422/20 Integrus audio input and interpreters module to connect to analogue discussion and conference systems (such as CCS 900) or to LBB 3222/04 6-channel interpreters desks.

Radiators

Two types of radiators are available:

- LBB 4511/00 medium-power radiator for small / medium conference venues.
- LBB 4512/00 high-power radiator for medium/large conference venues.

The radiators can be switched between full and half power use. They can be mounted on walls, ceilings or floor stands.

Infra-red receivers

Three multi-channel infra-red receivers are available:

- LBB 4540/04 for 4 audio channels
- LBB 4540/08 for 8 audio channels
- LBB 4540/32 for 32 audio channels

They can operate with a rechargeable NiMH battery pack or with disposable batteries. Charging circuitry is incorporated in the receiver.

Charging equipment

Equipment is available for charging and storing 56 pocket receivers. Two versions are available:

- LBB 4560/00 charging suitcase for portable systems
- LBB 4560/50 charging cabinet for permanent systems

System technology

IR radiation

The Integrus system is based on transmission by modulated infrared radiation. Infrared radiation forms part of the electro-magnetic spectrum, which is composed of visible light, radio waves and other types of radiation. It has a wavelength just above that of visible light. Like visible light, it is reflected from hard surfaces, yet passes through translucent materials such as glass. The infrared radiation spectrum in relation to other relevant spectra is shown in figure 2

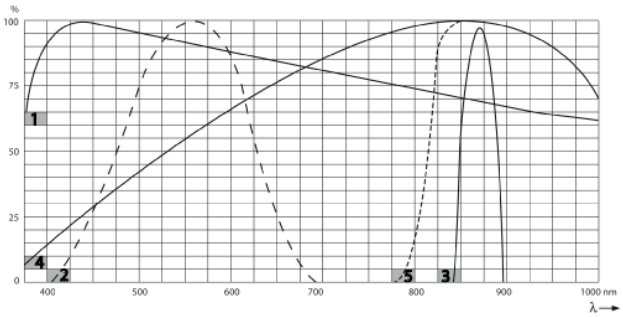


Figure 2: Infrared radiation spectrum in relation to other spectra
(1) Daylight spectrum
(2) Sensitivity of the human eye
(3) IR radiator
(4) Sensitivity of the IR sensor
(5) Sensitivity of the IR sensor with daylight filter

Signal Processing

The Integrus system uses high frequency carrier signals (typically 2 to 8 MHz) to prevent interference problems with modern light sources (see section ‘Ambient Lighting’). The digital audio processing guarantees a constant high audio quality.
The signal processing in the transmitter consists of the following main steps (see figure 3):

1. A/D conversion -Each analogue audio channel is converted to a digital signal.
2. Compression - The digital signals are compressed to increase the amount of information that can be distributed on each carrier. The compression factor is also related to the required audio quality.
3. Protocol Creation - Groups of up to four digital signals are combined into a digital information stream. Extra fault algorithm information is added. This information is used by the pocket receivers for fault detection and correction.
4. Modulation - A high frequency carrier signal is phase modulated with the digital information stream.
5. Radiation - Up to 8 modulated carrier signals are combined and sent to the IR radiators, which convert the carrier signals to modulated infrared light.

In the pocket receivers a reverse processing is used to convert the modulated infrared light to separate analogue audio channels.

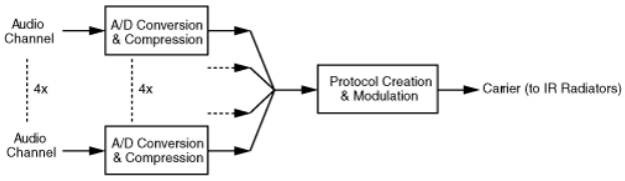


Figure 3: Overview of the signal processing (for one carrier)

4

Quality modes

The Integrus system can transmit audio in four different quality modes:

- Mono, standard quality, maximum 32 channels
- Mono, premium quality, maximum 16 channels
- Stereo, standard quality, maximum 16 channels
- Stereo, premium quality, maximum 8 channels

The standard quality mode uses less bandwidth and can be used for transmitting speech. For music the premium quality mode gives near CD quality.

Carriers and channels

The Integrus system can transmit up to 8 different carrier signals (depending on the transmitter type). Each carrier can contain up to 4 different audio channels. The maximum number of channels per carrier is dependent on the selected quality modes. Stereo signals use twice as much bandwidth as a mono signals, premium quality uses twice as much bandwidth as standard quality.
Per carrier a mix of channels with different quality modes is possible, as long as the total available bandwidth is not exceeded. The table below lists all possible channel combinations per carrier:

Channel Quality

Mono Standard	Mono Premium	Stereo Standard	Stereo Premium	Bandwidth
4				4 x 10 kHz
2	1			2 x 10 kHz and 1 x 10 kHz
2		1		2 x 10 kHz and 1 x 10 kHz (left) and 1 x 10 kHz (right)
	1	1		1 x 20 kHz and 1 x 10 kHz (left) and 1 x 10 kHz (right)
		2		2 x 20 kHz (left) and 2 x 10 kHz (right)
	2			2 x 20 kHz
			1	1 x 20 kHz (left) and 1 x 10 kHz (right)

Aspects of infrared distribution systems

A good infrared distribution system ensures that all delegates in a conference venue receive the distributed signals without disturbance. This is achieved by using enough radiators, placed at well planned positions, so that the conference venue is covered with uniform IR-radiation of adequate strength.
There are several aspects that influence the uniformity and quality of the infrared signal, which must be considered when planning an infrared radiation distribution system. These are discussed in the next sections.

Directional sensitivity of the pocket receiver

The sensitivity of a pocket receiver is at its best when it is aimed directly towards a radiator. The pocket receiver has an operating angle of 100 degrees (see Figure 4). Rotating the pocket receiver will decrease the sensitivity. For rotations of less than +/- 30 degrees this effect is not large, but for larger rotations the sensitivity will decrease rapidly.

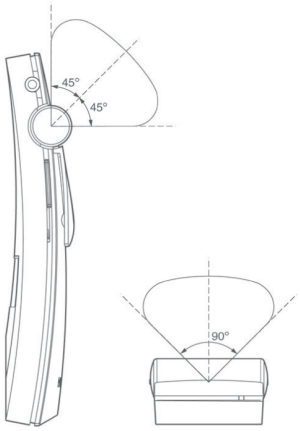


Figure 4: Directional characteristics of the pocket receivers

The footprint of the radiator

The coverage area of a radiator depends on the number of transmitted carriers and the output power of the radiator. The coverage area of the LBB 4512/00 radiator is twice as large as the coverage area of the LBB 4511/00. The coverage area can also be doubled by mounting two radiators side by side. The total radiation energy of a radiator is distributed over the transmitted carriers.
When more carriers are used, the coverage area gets proportionally smaller. The pocket receiver requires a strength of the IR signal of 4 mW/m2 per carrier to work without errors (resulting in a 80 dB S/N ratio for the audio channels).
The effect of the number of carriers on the coverage area can be seen in figure 5 and figure 6. The radiation pattern is the area within which the radiation intensity is at least the minimum required signal strength.

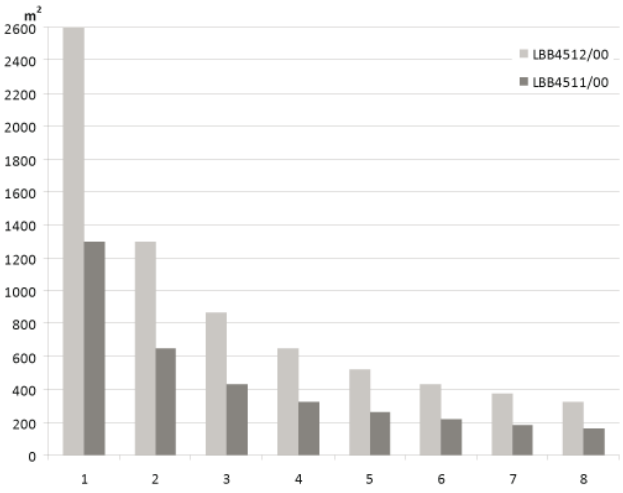


Figure 5: Total coverage area of LBB 4511/00, LBB 4512/00 and LBB 3410/05 for 1 to 8 carriers

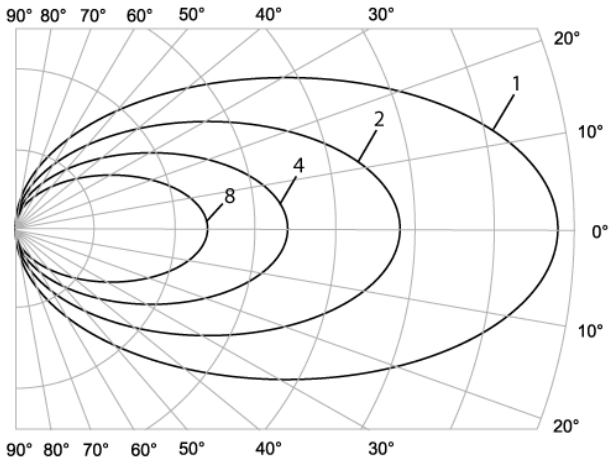


Figure 6: Polar diagram of the radiation pattern for 1, 2, 4 and 8 carriers

The cross section of the 3-dimensional radiation pattern with the floor of the conference venue is known as the footprint (the white area in figure 7 to figure 9). This is the floor area in which the direct signal is strong enough to ensure proper reception, when the pocket receiver is directed towards the radiator. As shown, the size and position of the footprint depends on the mounting height and angle of the radiator.

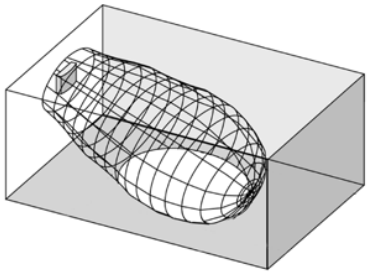


Figure 7: The radiator mounted at 15° to the ceiling

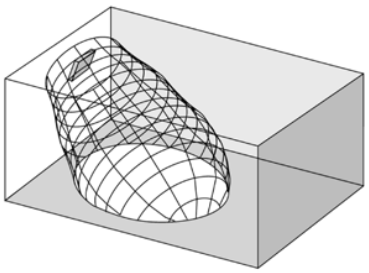


Figure 8: The radiator mounted at 45° to the ceiling

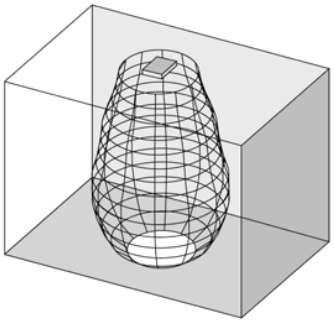


Figure 9: The radiator mounted perpendicular (at 90°) to the ceiling

Ambient lighting

The Integrus system is practically immune for the effect of ambient lighting. Fluorescent lamps (with or without electronic ballast or dimming facility), such as TL lamps or energy saving lamps give no problems with the Integrus system. Also sunlight and artificial lighting with incandescent or halogen lamps up to 1000 lux give no problems with the Integrus system. When high levels of artificial lighting with incandescent or halogen lamps, such as spotlights or stage lighting are applied, you should directly point a radiator at the pocket receivers in order to ensure reliable transmission. For venues containing large, unscreened windows, you must plan on using additional radiators. For events taking place in the open air a site test will be required in order to determine the required amount of radiators. With sufficient radiators installed, the pocket receivers will work without errors, even in bright sunlight.

Objects, surfaces and reflections

The presence of objects in a conference venue can influence the distribution of infrared light. The texture and color of the objects, walls and ceilings also plays an important role.

Infrared radiation is reflected from almost all surfaces. As is the case with visible light, smooth, bright or shiny surfaces reflect well. Dark or rough surfaces absorb large proportions of the infrared signal (see figure 10). With few exceptions it cannot pass through materials that are opaque to visible light.

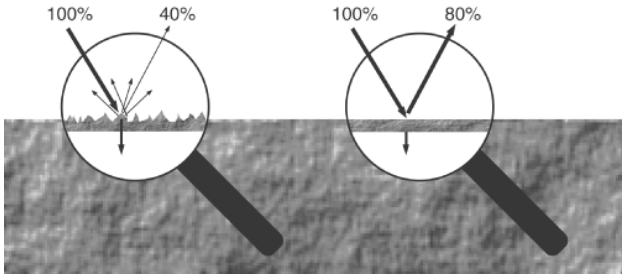


Figure 10: The texture of the material determines how much light is reflected and how much is absorbed

Problems caused by shadows from walls or furniture can be solved by ensuring that there are sufficient radiators and that they are well positioned, so that a strong enough infrared field is produced over the whole conference area. Care should be taken not to direct radiators towards uncovered windows, as most of this radiation will subsequently be lost.

Positioning the radiators

Since infrared radiation can reach a pocket receiver directly and/or via diffused reflections, it is important to take this into account when considering the positioning of the radiators. Though it is best if pocket receivers pick up direct path infrared radiation, reflections improve the signal reception and should therefore not be minimized. Radiators should be positioned high enough not to be blocked by people in the hall (see figures 11 and 12).

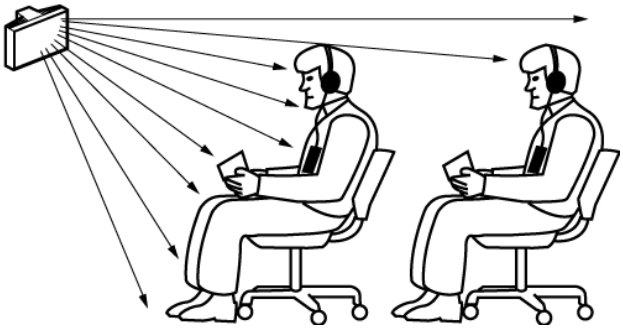


Figure 11: Infrared signal blocked by a person in front of the participant

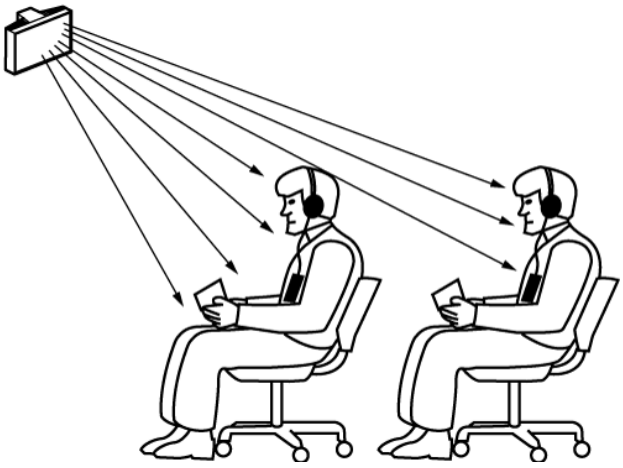


Figure 12: Infrared signal not blocked by a person in front of the participant

The figures below illustrate how infrared radiation can be directed to conference participants. In figure 13, the participant is situated clear from obstacles and walls, so a combination of direct and diffused radiation can be received. Figure 14 shows the signal being reflected from a number of surfaces to the participant.

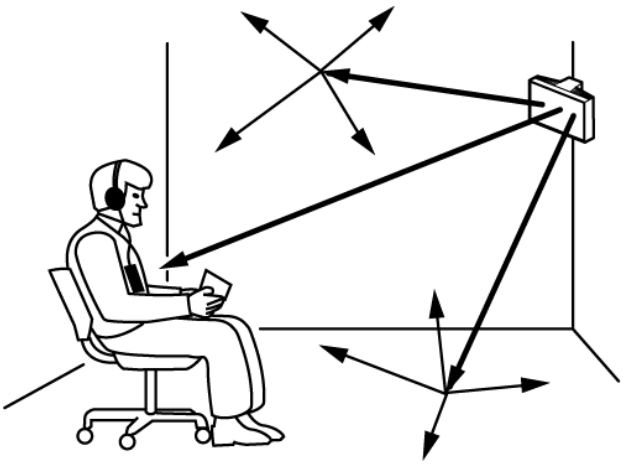


Figure 13: Combination of direct and reflected radiation

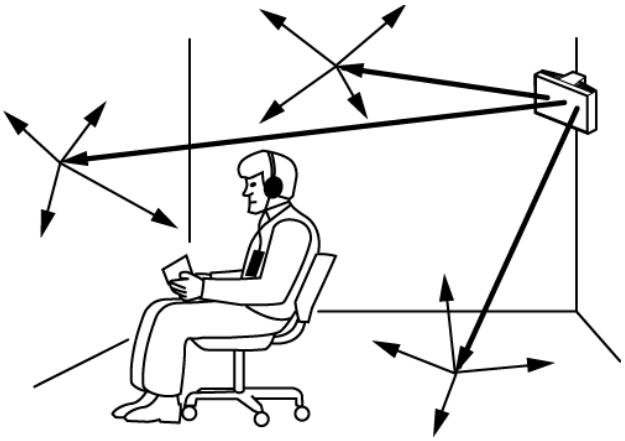


Figure 14: Combination of several reflected signals

For concentrically arranged conference rooms, centrally placed, angled radiators located high up can cover the area very efficiently. In rooms with few or no reflecting surfaces, such as a darkened film-projection room, the audience should be covered by direct path infrared radiation from radiators positioned in front. When the direction of the pocket receiver changes, e.g. with varying seat arrangements, mount the radiators in the corners of the room (see figure 15).

If the audience is always directed towards the radiators, you do not need radiators at the back (see figure 16). If the path of the infrared signals is partially blocked, e.g. under balconies, you should cover the ‘shaded’ area with an additional radiator (see figure 17).

The figures below illustrate the most effective positioning of the radiators:

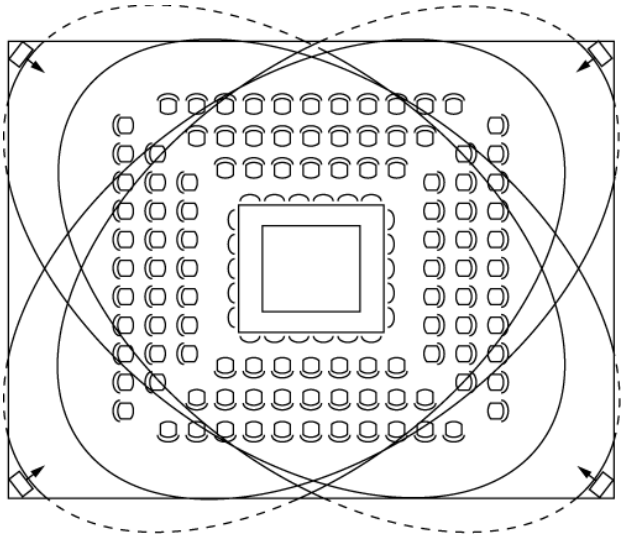


Figure 15: Radiators covering seats arranged in a square

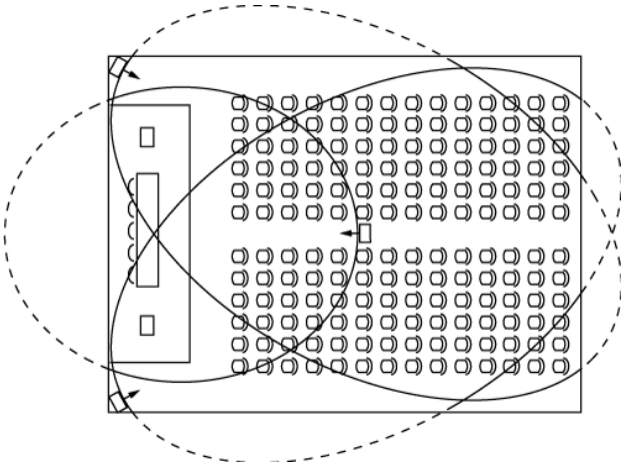


Figure 16: Radiator position in a conference hall with auditorium seating and podium

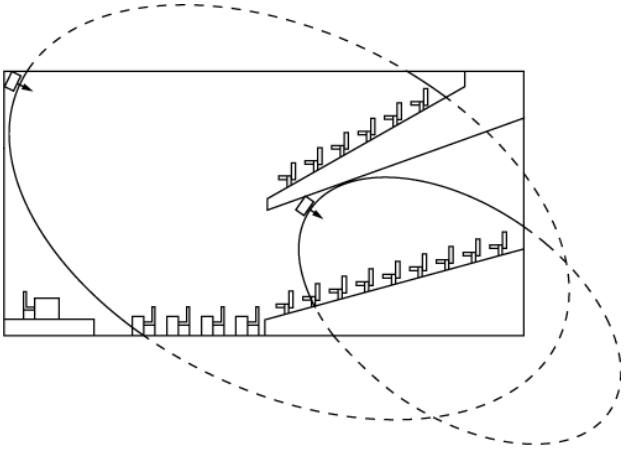


Figure 17: Radiators covering seats beneath a balcony

Overlapping footprints and multipath effects
When the footprints of two radiators partly overlap, the total coverage area can be larger than the sum of the two separate footprints. In the overlap area the signal radiation power of two radiators are added, which increases the area where the radiation intensity is larger than the required intensity.

However, differences in the delays of the signals picked up by the pocket receiver from two or more radiators can cause the signals to cancel each other out (multi path effect). In worst-case situations this can lead to a loss of reception at such positions (black spots). Figures 18 and 19 show the effect of overlapping footprints and differences in signal delays.

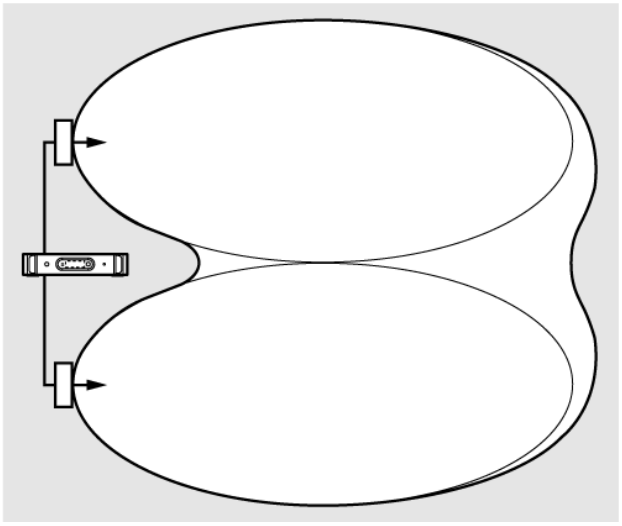


Figure 18: Increased coverage from added radiation power

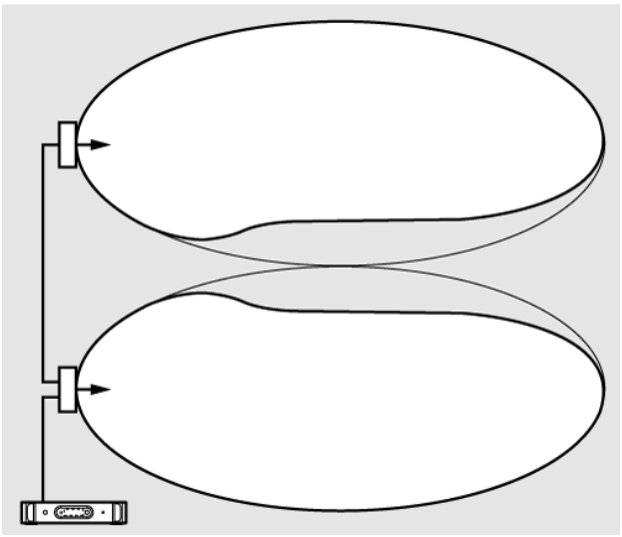


Figure 19: Reduced coverage caused by cable signal delay differences

The lower the carrier frequency, the less susceptible the pocket receiver is for differences in signal delays.
The signal delays can be compensated by using the delay compensation switches on the radiators (see manual).

Planning an Integrus infrared radiation system

Rectangular footprints
Determining the optimal number of radiators required to give 100% coverage of a hall can normally only be done by performing a site test. However, a good estimation can be made by using ‘guaranteed rectangular footprints’. Figures 20 and 21 show what is meant by a rec-

tangular footprint. As can be seen, the rectangular footprint is smaller than the total footprint. Note that in figure 21 the 'offset' X is negative because the radiator is actually mounted beyond the horizontal point at which the rectangular footprint starts.

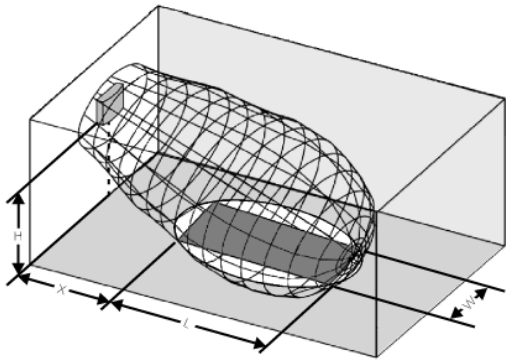


Figure 20: Typical rectangular footprint for a 15° mounting angle

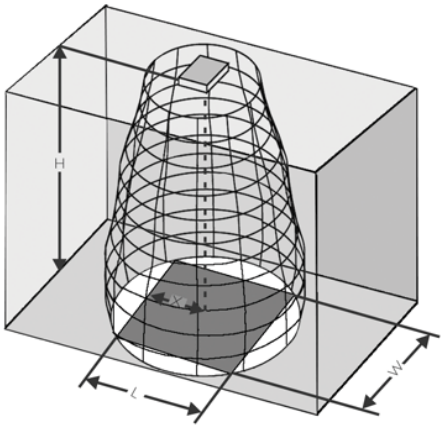


Figure 21: Typical rectangular footprint for a 90° mounting angle

The guaranteed rectangular footprints for various numbers of carriers, mounting heights and mounting angles can be found in the section 'Guaranteed rectangular footprints'. The height is the distance from the reception plane and not from the floor.

Guaranteed rectangular footprints can also be calculated with the footprint calculation tool (available on the documentation CD-ROM). The given values are for one radiator only, and therefore do not take into consideration the beneficial effects of overlapping footprints. The beneficial effects of reflections are also not included.

Generally (for systems with up to 4 carriers) if the pocket receiver can pick up the signal of two adjacent radiators, the distance between these radiators can be increased approximately by a factor 2.4 (see figure 22).

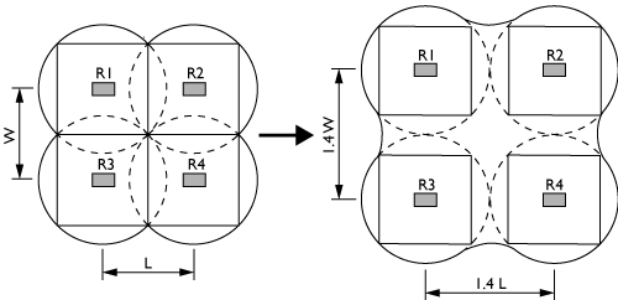


Figure 22: The effect of overlapping footprints

Planning radiators

Use the following procedure to plan the radiators:

1. Follow the recommendations in section 'Aspects of infrared distribution systems' to determine the radiator positions.
2. Look up (in the table) or calculate (with the footprint calculation tool) the applicable rectangular footprints.
3. Draw the rectangular footprints in the room lay-out.
4. If the pocket receiver can pick up the signal of two adjacent radiators in some areas, determine the overlap effect and draw the footprint enlargement(s) in the room lay-out.
5. Check if you have sufficient coverage with the radiators at the intended positions. If not, add additional radiators to the room.

See figures 15, 16 and 17 for examples of a radiator lay-out.

Cabling

Signal delay differences can occur due to differences in the cable length from the transmitter to each radiator. To minimize the risk of black spots use equal cable length from transmitter to radiator if possible (see figure 23).

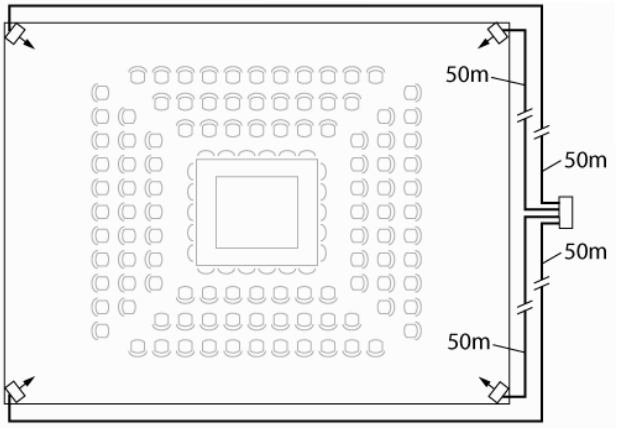


Figure 23: Radiators with equal cable length

When radiators are loop-through connected, the cabling between each radiator and the transmitter should be as symmetrical as possible (see figures 24 and 25). The differences in cable signal delays can be compensated with the signal delay compensation switches on the radiators.

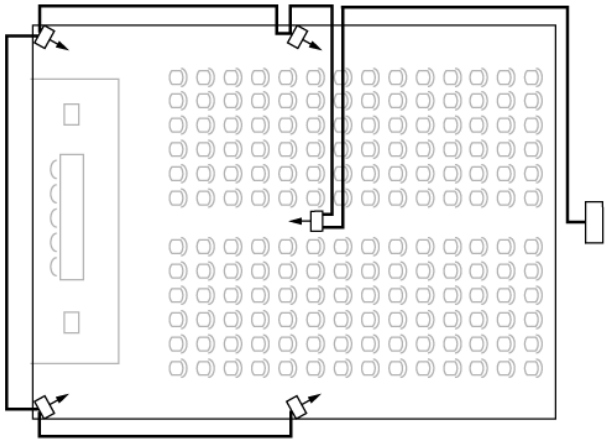


Figure 24: Asymmetrical radiator cabling (to be avoided)

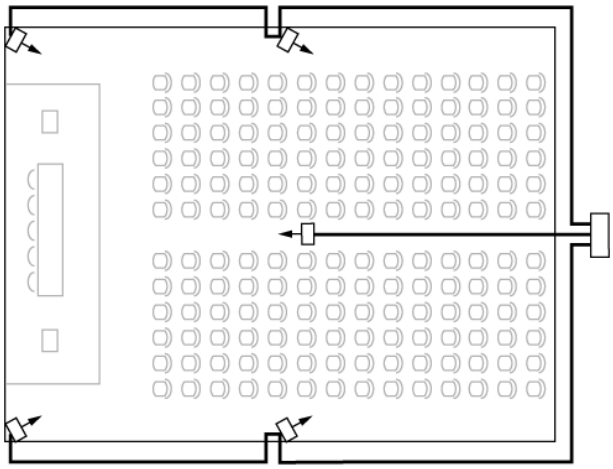


Figure 25: Symmetrical radiator cabling (recommended)

			LBB 4511/00 at full power				LBB 4512/00 at full power			
Nr.	H	α	A	L	W	X	A	L	W	X
1	2,5	0	814	37	22	8,5	1643	53	31	11,5
	5	15	714	34	21	8	1440	48	30	10,5
		30	560	28	20	5	1026	38	27	6,5
		45	340	20	17	2	598	26	23	3
		60	240	16	15	-0,5	380	20	19	0
		90	169	13	13	-6,5	196	14	14	-7
	10	15	770	35	22	10	1519	49	31	12,5
		30	651	31	21	6	1189	41	29	8
		45	480	24	20	2,5	837	31	27	3
		60	380	20	19	-1,5	600	25	24	-1
		90	324	18	18	-9	441	21	21	-10,5
	20	30	609	29	21	12	1364	44	31	11
		45	594	27	22	6	1140	38	30	4,5
		60	504	24	21	0,5	899	31	29	-1,5
		90	441	21	21	-10,5	784	28	28	-14
2	2,5	15	360	24	15	5	714	34	21	7
	5	15	375	25	15	6	714	34	21	8
		30	294	21	14	4	560	28	20	5
		45	195	15	12	1,5	340	20	17	2
		60	156	13	12	-1	240	16	15	-0,5
		90	121	11	11	-5,5	169	13	13	-6,5
	10	30	330	22	15	5,5	651	31	21	6
		45	285	19	15	2,5	480	24	20	2,5
		60	224	16	14	-1	380	20	19	-1,5
		90	196	14	14	-7	324	18	18	-9
	20	60	255	17	15	2,5	504	24	21	0,5
		90	225	15	15	-7,5	441	21	21	-10,5
4	2,5	15	187	17	11	4	360	24	15	5
	5	15	187	17	11	5	375	25	15	6
		30	165	15	11	3,5	294	21	14	4
		45	120	12	10	1,5	195	15	13	1,5
		60	90	10	9	-0,5	156	13	12	-1
		90	81	9	9	-4,5	121	11	11	-5,5
	10	45	154	14	11	3	285	19	15	2,5
		60	132	12	11	0	224	16	14	-1
		90	100	10	10	-5	196	14	14	-7
	20	90	100	10	10	-5	225	15	15	-7,5
8	2,5	15	96	12	8	3	187	17	11	4
	5	15	84	12	7	4,5	187	17	11	5
		30	88	11	8	3	165	15	11	3,5
		45	63	9	7	1,5	120	12	10	1,5
		60	56	8	7	-0,5	90	10	9	-0,5
		90	49	7	7	-3,5	81	9	9	-4,5
	10	60	64	8	8	1,5	132	12	11	0
		90	64	8	8	-4	100	10	10	-5

Guaranteed rectangular footprints of the radiators at full power (shown in metric units)

Nr	Number of carriers
H	Mounting height (m) from the reception plane
α	Mounting angle (degrees)
A	Area (m^2)
L	Length (m)
W	Width (m)
X	Offset (m)

			LBB 4511/00 at full power				LBB 4512/00 at full power			
Nr.	H	α	A	L	W	X	A	L	W	X
1	8	0	8712	121	72	28	17748	174	102	38
	16	15	7728	112	69	26	15386	157	98	34
		30	6072	92	66	16	11125	125	89	21
		45	3696	66	56	7	6375	85	75	10
		60	2548	52	49	-2	4092	66	62	0
		90	1849	43	43	-21	2116	46	46	-23
	33	15	8280	115	72	33	16422	161	102	41
		30	7038	102	69	20	12825	135	95	26
		45	5214	79	66	8	9078	102	89	10
		60	4092	66	62	-5	6478	82	79	-3
		90	3481	59	59	-30	4761	69	69	-34
	66	30	6555	95	69	39	14688	144	102	36
		45	6408	89	72	20	12250	125	98	15
		60	5451	79	69	2	9690	102	95	-5
		90	4761	69	69	-34	8464	92	92	-46
2	8	15	3871	79	49	16	7728	112	69	23
	16	15	4018	82	49	20	7728	112	69	26
		30	3174	69	46	13	6072	92	66	16
		45	1911	49	39	5	3696	66	56	7
		60	1677	43	39	-3	2548	52	49	-2
		90	1296	36	36	-18	1849	43	43	-21
	33	30	3528	72	49	18	7038	102	69	20
		45	3038	62	49	8	5214	79	66	8
		60	2392	52	46	-3	4092	66	62	-5
		90	2116	46	46	-23	3481	59	59	-30
	66	60	2744	56	49	8	5451	79	69	2
		90	2401	49	49	-25	4761	69	69	-34
4	8	15	2016	56	36	13	3871	79	49	16
	16	15	2016	56	36	16	4018	82	49	20
		30	1764	49	36	11	3174	69	46	13
		45	1287	39	33	5	2107	49	43	5
		60	990	33	30	-2	1677	43	39	-3
		90	900	30	30	-15	1296	36	36	-18
	33	45	1656	46	36	10	3038	62	49	8
		60	1404	39	36	0	2392	52	46	-3
		90	1089	33	33	-16	2116	46	46	-23
	66	90	1089	33	33	-16	2401	49	49	-25
8	8	15	1014	39	26	10	2016	56	36	13
	16	15	897	39	23	15	2016	56	36	16
		30	936	36	26	10	1764	49	36	11
		45	690	30	23	5	1287	39	33	5
		60	598	26	23	-2	990	33	30	-2
		90	529	23	23	-11	900	30	30	-15
	33	60	676	26	26	5	1404	39	36	0
		90	676	26	26	-13	1089	33	33	-16

Guaranteed rectangular footprints of the radiators at full power (shown in imperial units)

Nr	Number of carriers
H	Mounting height (ft) from the reception plane
α	Mounting angle (degrees)
A	Area (ft^2)
L	Length (ft)
W	Width (ft)
X	Offset (ft)

System Specification

4

Features

- Up to 32 digital audio channels
- Wireless transmission gives participants freedom of movement
- Digitized audio ensures very high audio quality
- Powerful compression techniques enable efficient, low-loss transmission
- Comprehensive error correction ensures error-free transmission

Functions

- Conference hall privacy; the conference venue itself acts as a barrier to infrared signals escaping and being overheard (infrared cannot pass through opaque structures such as walls)
- No interference between separate conference rooms makes it possible to use an unlimited number of systems in adjacent rooms
- Synchronization with the number of channels in use means the user does not have to scroll through unused channels
- Quality levels are programmable per channel, giving maximum flexibility for optimizing transmission
- Premium quality modes for distribution of very high quality sound
- Transmission in 2-8 MHz frequency band eliminates disturbance from all types of lighting systems

Certifications and approvals

CE marking	Conforms to IEC 60914, the international standard for conference systems. Conforms to IEC 61603 part 7, the international standard for digital infrared transmission of audio signals for conference and similar applications
Safety:	INT-TX range, LBB 4560/00, LBB 4560/50: EN60065/CAN/CSA-C22.2 60065 (Canada) / UL60065 (USA). LBB 4511/00, LBB 4512/00: EN60065/CAN/CSA-C22.2 60065 (Canada) / UL1419 (USA) LBB 4540 range: EN60065
EMC emission	According to harmonized standard EN 55103-1 and FCC rules part 15, complying with the limits for a class A digital device
EMC immunity	According to harmonized standard EN 55103-2
EMC approvals	Affixed with the CE mark
ESD	According to harmonized standard EN 55103-2
Mains harmonics	According to harmonized standard EN 55103-1
Environmental requirements	Contains no banned substances as specified in UAT-0480/100 (e.g. no cadmium or asbestos)

Technical specifications

Transmission Characterisitics

IR transmission wavelength	870 nm
Modulation frequency	
Carriers 0 to 5	2 to 6 MHz (according to IEC 61603 part 7)
Carriers 6 and 7	up to 8 MHz
Protocol and modulation technique	DQPSK (according to IEC technique 61603 part 7)

System Audio Performance

Measured from the audio input of an INT-TX transmitter to the headphone output of an LBB 4540 pocket receiver

Audio frequency response	
at Standard Quality	20 Hz to 10 kHz (-3 dB)
at Premium Quality	20 Hz to 20 kHz (-3 dB)
Total harmonic distortion at 1 kHz	< 0.05%
Crosstalk attenuation at 1 kHz	> 80 dB
Dynamic range	> 80 dB
Weighted signal-to-noise ratio	> 80 dB(A)

Cabling and System Limits

Cable type	75 ohm RG59
Maximum number of radiators	30 per HF output
Maximum cable length	900 m (2,970 feet) per HF output

System Environmental Conditions

Working conditions	Fixed / stationary / portable
Temperature range	
transport	-40 to +70 °C (-40 to 158 °F)
operating and storage	
for LBB 4560 and INT-RX	+5 to +35 °C (41 to 113 °F)
for LBB 4511/00 and LBB 4512/00	+5 to +45 °C (41 to 122 °F)
for INT-TX	+5 to +55 °C (41 to 131 °F)
Humidity	
transport	5 to 95%
operating and storage	15 to 90%

INT-TX Integrus transmitter

4

Features

- Can distribute a maximum of 4, 8, 16 or 32 audio channels
- Can be used with DCN Next Generation, or analogue systems like the CCS 900
- Flexible configuration of channels and channel quality modes for efficient distribution
- Configuration of transmitter and system via a display and one single rotary push button

The transmitter is the central element in the Integrus system. It accepts analogue or digital input, modulates these signals onto carrier waves and transmits these carrier waves to radiators located in the room.

Functions

- Auxiliary mode for distribution of music to all channels during a break
- Slave mode for distribution of signals from another transmitter allows multiple rooms to be used
- Test mode which produces a different frequency tone for each input/channel, with the tone gradually rising as the channels are stepped through
- Adjustable sensitivity for each input to enable fine tuning of audio levels
- Built-in mini infrared radiator for audio monitoring
- Radiator and system status indication via display
- Each transmitter can be assigned a unique name by the installer for easy identification in a multi-transmitter system
- Each audio channel can also be assigned a unique name by the installer. These names can be selected from a list of options or entered manually
- Automatic distribution of emergency messages to all channels
- Automatic standby/on function
- Automatic synchronization to the number of channels in use in a DCN system
- Automatic synchronization of language names in use in a DCN Next Generation system
- Universal mains power facility allows use worldwide
- Stylish 19” (2U) housing for tabletop use or rack mounting
- Handgrips for easy transportation

Controls and Indicators

- 2 x 16 character LCD display for status information and transmitter configuration
- Rotary push button for navigation through menus and configuration
- Power on/off switch on front panel

Interconnections

Interconnections (at rear of transmitter)

- Male Euro socket for mains connection
- Slot with audio data bus connector (H 15, female) for accepting LBB 3422/20 Symmetrical Audio Input and Interpreters Module
- 4, 8, 16 or 32 cinch connectors for input of asymmetrical audio signals
- Two XLR sockets for input of symmetrical signals of floor, emergency messages or music
- One terminal block socket for distribution of emergency messages to all channels
- 3.5 mm (0.14 in) stereo headphone socket for monitoring inputs and channels
- One BNC connector for accepting an HF signal from another transmitter
- Six BNC connectors for output of HF signal to up to 30 radiators
- Two Optical Network Connectors for connection within a DCN Next Generation system*

* LBB 4416/xx Optical Network Cables required

Parts included

Quantity	Component
1	INT-TX Integrus transmitter
1	19” rack mounting brackets, detachable feet and mounting accessories for modules included
1	System installation and operating manual on CD-ROM
1	Mains cable

Technical specifications

Electrical

Mains voltage	100-240 Vac, 50-60 Hz
Power consumption	
operating, maximum	55 W
standby	29 W
Asymmetrical audio inputs	+3 dBV nominal, +6 dBV maximum (± 6 dB) +15 dBV nominal, +18 dBV maximum (± 6 dB)
Symmetrical audio inputs	+6 to +18 dBV nominal

Emergency switch connector	Emergency control input
Headphone output	32 ohm to 2 kohm
HF input	Nominal 1 Vpp, minimum 10 mVpp, 75 ohm
HF output	1 Vpp, 6 VDC, 75 ohm

Mechanical

Dimensions (H x W x D)	
for tabletop use, with feet	92 x 440 x 410 mm (3.6 x 17.3 x 16.1 in)
for 19" rack use, with brackets	88 x 483 x 410 mm (3.5 x 19 x 16.1 in)
in front of brackets	40 mm (1.6 in)
behind brackets	370 mm (14.6 in)
Weight without brackets, with feet	6.8 kg (15.0 lb)
Mounting	Brackets for 19" rack mounting or fixing to a tabletop Detachable feet for free-standing on a tabletop
Color	Charcoal (PH 10736) with silver

Ordering information

INT-TX04 4-Channel Transmitter
Integrus 4-channel transmitter.
Order number **INT-TX04**

INT-TX08 8-Channel Transmitter
Integrus 8-channel transmitter.
Order number **INT-TX08**

INT-TX16 16-Channel Transmitter
Integrus 16-channel transmitter.
Order number **INT-TX16**

INT-TX32 32-Channel Transmitter
Integrus 32-channel transmitter.
Order number **INT-TX32**

INT-TX04-US 4-Channel Transmitter (US)
Integrus 4-channel transmitter. US version.
Order number **INT-TX04-US**

INT-TX08-US 8-Channel Transmitter (US)
Integrus 8-channel transmitter. US version.
Order number **INT-TX08-US**

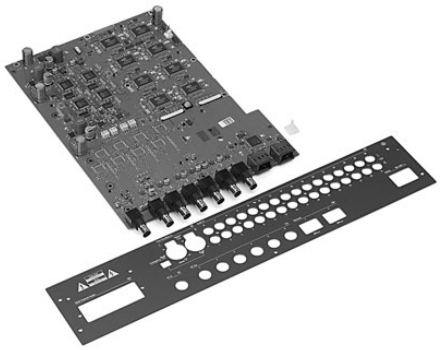
INT-TX16-US 16-Channel Transmitter (US)
Integrus 16-channel transmitter. US version.
Order number **INT-TX16-US**

INT-TX32-US 32-Channel Transmitter (US)
Integrus 32-channel transmitter. US version.
Order number **INT-TX32-US**

Accessories

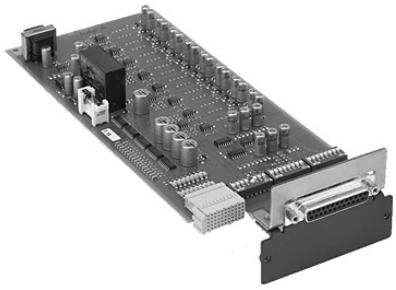
LBB 3422/20 Symmetrical Audio Input and Interpreter Module
Symmetrical audio input and interpreter module for interfacing the integrus transmitter with the CCS 900 discussion systems and the LBB 3222/04 6-channel interpreter desk.
Order number **LBB3422/20**

INT-TXK Transmitter Upgrade Kits



To upgrade a transmitter without an optical network connection (LBB 4502 range) to a transmitter with an optical network connection (INT-TX range) a Transmitter Upgrade Kit (INT-TXK) is required. The upgrade kit comprises the main PCB of the transmitter, a rear panel, a glue stud and a screw for mounting the main PCB in the housing of the LBB 4502 transmitter.

LBB 3422/20 Symmetrical Audio Input and Interpreter Module



Features

- Direct connection of up to 12 LBB 3222/04 Interpreter Desks for six languages
- Routing of floor signal (for instance from a CCS 900 discussion system) to interpreter desks
- Eight symmetrical inputs
- Facility for mounting input transformers for galvanic isolation between audio source and the transmitter

The LBB 3422/20 Symmetrical Audio Input and Interpreters Module is used for interfacing the transmitter with the CCS 900 discussion systems and the LBB 3222/04 6-Channel Interpreter Desk with Loudspeaker. Different connections and switch settings are possible to also allow the module to be used with non-Bosch systems.

Functions

Controls and Indicators

- On-board switches can be set for directly connecting interpreter desks (LBB 3222/04) or other audio sources
- An on-board switch can be used to match the amplification of floor signals from CCS 900 or from other analogue conference systems
- An on-board switch can be used to replace the interpretation signal with the floor signal for distribution to the listeners when an interpreter channel is not in use

Interconnection

- Symmetrical analogue audio input; 25-pole female sub-D connector
- Audio and data bus connector; H 15 male connector

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Audio input level with AGC	-16.5 dBV (150 mVeff) to +3.5 dBV (1500 mVeff)
Audio input level without AGC	-4.4 dBV (600 mVeff)
Asymmetric input impedance	≥ 10 kohm
DC input impedance	≥ 200 kohm

Mechanical

Mounting	Front panel is removed when used with INT-TX Integrus Transmitter
Dimensions (H x W x D) without front panel	100 x 26 x 231 mm (39 x 10 x 91 in)
Weight without front panel	132 g (0.29 lb)

Ordering information

LBB 3422/20 Symmetrical Audio Input and Interpreter Module
Symmetrical audio input and interpreter module for interfacing the integrus transmitter with the CCS 900 discussion systems and the LBB 3222/04 6-channel interpreter desk.
Order number **LBB3422/20**

DCN-FCCCU Flight Case for 2 Central Control Units

Features

- Robust construction with reinforced corners
- Easy to carry and store
- Shaped interior
- Holds up to two 19” units

The DCN-FCCCU flight case accommodates two 19” units, e.g. 1 central control unit (CCU) + 1 transmitter or 1 audio expander unit.

Technical specifications

Mechanical

Dimensions (H x W x D)	510 x 460 x 290 mm (20.1 x 18.1 x 11.4 in)
Weight	6 kg (13.2 lb)
Color	Light grey

Ordering information

DCN-FCCCU Flight Case for 2 Central Control Units
DCN Next Generation flight case for two 19” units: CCU, audio expander, transmitter.
Order number **DCN-FCCCU**

LBB 451x/00 Integrus Radiators

Features

- LBB 4511/00 covers up to 1300 m² (one carrier, 4 standard quality channels)
- LBB 4512/00 covers up to 2600 m² (one carrier, 4 standard quality channels)
- Automatic gain control ensures the IREDs (infrared emitting diodes) function with maximum efficiency
- Power output selection for efficiency and economy
- Safety eye

These radiators are used to distribute infrared signals throughout the conference venue, enabling delegates to listen to the proceedings by means of personal pocket receivers.

Functions

- Universal mains power facility allows use worldwide
- No fan - cooled by convection - resulting in quieter operation and less moving parts to wear out
- LED indicators for radiator status checking
- Communication between radiator and transmitter for easy checking by the operator
- Automatically switches on when transmitter is switched on and vice versa
- Automatic cable equalization ensures maximum trans-mission efficiency with different quality of cables
- Automatic cable termination simplifies installation
- Temperature protection circuitry automatically switches radiator from full- to half- power if the temperature becomes too high
- Adjustable radiator angle ensures maximum coverage
- IREDs protected by a cover plate, making the units easy to maintain and clean
- Attractive and stylish design

Controls and Indicators

- Two yellow LEDs: one on each radiator panel to indicate that this panel is switched on and is receiving carrier waves from the transmitter
- Two red LEDs: one on each radiator panel to indicate that this panel is in standby mode
- Red and yellow LEDs simultaneously illuminated to indicate the radiator panel is malfunctioning
- Red LED flashing and yellow LEDs to indicate the radiator panel is in temperature protection mode
- Power reduction switch to reduce the output of the radiator to half-power
- Two delay compensation switches to compensate for differences in cable lengths between transmitter and radiators

Interconnection

- Male Euro socket for mains connection
- HF input and output connectors (2 x BNC) for connection to transmitter and loop-through to other radiators

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Parts included

Quantity	Component
1	LBB 451x/00 Integrus Radiator
1	Mains cable
1	Bracket for mounting unit on ceiling
2	Plates for mounting unit on floor stand

Technical specifications

Electrical

Mains voltage	100-240 Vac, 50-60 Hz
Power consumption	
LBB 4511, operating	100 W
LBB 4511, standby	8 W
LBB 4512, operating	180 W
LBB 4512, standby	10 W
Number of IREDs	
LBB 4511	260
LBB 4512	480
Total optical peak intensity	
LBB 4511	12 W/sr
LBB 4512	24 W/sr
Angle of half intensity	± 22°
HF input	Nominal 1 Vpp, minimum 10 mVpp

Mechanical

Mounting	• Suspension bracket for direct ceiling mounting. • Mounting plates for floor stands with M10 and 1/2 in Whitworth thread. • Optional wall mounting bracket (LBB 3414/00) available. • Safety eye.
Dimensions (H x W x D)	

LBB 4511 without bracket	200 x 500 x 175 mm (7.9 x 19.7 x 6.9 in)
LBB 4512 without bracket	300 x 500 x 175 mm (11.0 x 19.7 x 6.9 in)
Radiator angle	
floor-stand mounting	0, 15, and 30°
wall/ceiling mounting	0, 15, 30, 45, 60, 75 and 90°
Weight	
LBB 4511 without bracket	6.8 kg (15 lb)
LBB 4511 with bracket	7.6 kg (17 lb)
LBB 4512 without bracket	9.5 kg (21 lb)
LBB 4512 with bracket	10.3 kg (23 lb)
Color	Bronze

Ordering information

LBB 4511/00 Integrus Radiator
Integrus medium-power radiator to cover up to 1300 m^2 (13993 ft^2).
Order number **LBB4511/00**

LBB 4512/00 Integrus Radiator
Integrus high-power radiator to cover up to 2600 m^2 (27986 ft^2).
Order number **LBB4512/00**

LBB 4511/00-US Integrus Radiator (US)
Integrus medium-power radiator to cover up to 1300 m^2 (13993 ft^2). US version.
Order number **LBB4511/00-US**

LBB 4512/00-US Integrus Radiator (US)
Integrus high-power radiator to cover up to 2600 m2 (27986 ft2). US version.
Order number **LBB4512/00-US**

Accessories

LBB 3414/00 Wall Mounting Bracket
LBB 3414/00 Wall Mounting Bracket for radiators.
Order number **LBB3414/00**

INT-FCRAD Flight Case for Radiator
INT-FCRAD Flight Case for 1 radiator.
Order number **INT-FCRAD**

INT-FCRAD Flight Case for Radiator

Features

- Robust construction with reinforced corners
- Easy to carry and store
- Shaped interior
- Holds one radiator

Storage suitcase for LBB 4511/00 or LBB 4512/00 Radiator.

Technical specifications

Mechanical

Dimensions (H x W x D)	250 x 540 x 400 mm (10 x 21 x 16 in)
Weight	7.0 kg (15 lb)
Color	grey

Ordering information

INT-FCRAD Flight Case for Radiator
INT-FCRAD Flight Case for 1 radiator.
Order number **INT-FCRAD**

LBB 3414/00 Wall Mounting Bracket

Bracket to wall mount the LBB 4511/00 and LBB 4512/00 Radiators.

Technical specifications

Mechanical

Dimensions (H x W x D)	200 x 280 x 160 mm (7.9 x 11.0 x 6.3 in)
Weight	1.8 kg (4.0 lb)
Color	Quartz grey

Ordering information

LBB 3414/00 Wall Mounting Bracket
LBB 3414/00 Wall Mounting Bracket for radiators.
Order number **LBB3414/00**

LBC 1259/01 Universal Floorstand

Features

- Multi-purpose, lightweight aluminum stand
- For mounting a loudspeaker, wireless access point or Integrus radiator
- Double-braced folding base
- Reducer flange for different mountings
- Hand-adjustable

This universal floorstand provides effective mounting solutions for loudspeaker installations, a Wireless Access Point of the DCN-Wireless system, or a radiator of the Integrus digital language distribution system. They are manufactured and finished to the same high standards as all Bosch products, assuring excellent quality and guaranteed compatibility throughout the range. The LBC 1259/01 is suited to a wide range of applications where a secure yet transportable mounting solution is required.

Functions

Adjustable and safe

The LBC 1259/01 floorstand is hand-adjustable using a spring-loaded locking screw for heights between 1.4 and 2.2 m (4.6 and 7.2 ft). An extra safety bolt on the support can be tightened to ensure the stand remains extended.
This lightweight stand has a double-braced folding base for extra strength, and a wide leg span to ensure stability.

Adaptable

The floorstand is standard supplied with a 36 mm (1.42 in) reducer flange with an M10 x 12 threaded pin to mount different sized equipment, and with an M10 knob to fix the Wireless Access Point mounting bracket.

Accessories

For storage and ease of transport, a carrier bag is available with two inside compartments with separate zippers for holding two universal floorstands (LBC 1259/01). The bag, with Bosch logo, is made from sturdy black weather-proof nylon. Two handles are fitted for carrying the bag by hand or over the shoulder.

LM1-CB Carrier Bag (optional)

Installation/configuration notes

LBC 1259/01 with DCN Wireless Access Point, LBB 451x/00 Infra--red Radiator and XLA 3200 Line Array Loudspeaker

Parts included

Quantity	Component
1	LBC 1259/01 Universal Floorstand
1	36 mm (1.42 in) reducer flange with (M10 x 12) threaded pin
1	M10 securing knob for WAP mounting bracket
2	Metal filler rings

Technical specifications

Mechanical

Length: standing	1.4 to 2.2 m (4.6 to 7.2 ft)
Length: folded	1.24 m (4.06 ft)
Width: legs extended	1.32 m (4.33 ft)
Width: legs folded	130 mm (5.1 in)
Weight	4.8 kg (10.58 lb)
Max. centric load	50 kg (110.2 lb)
Material	Aluminum/steel

Color	White aluminum (RAL 9006) with black parts
Tube diameter	35 mm (1.37 in)
Carrier bag accessory	
Dimensions (L x D)	1.25 m x 27 mm (49 x 1.06 in)
Weight	750 g (1.65 lb)
Color	Black with light grey handles
Material	Nylon

Ordering information

LBC 1259/01 Universal Floorstand
Universal floor stand lightweight aluminum construction, foldable, M10 x 12 reducer flange.
Order number **LBC1259/01**

Accessories

LM1-CB Carrier Bag for two floorstands
Carrying bag for storing and transporting two floor stands.
Order number **LM1-CB**

LBB 4540 Integrus Pocket Receivers

Features

- Specially-designed IC for maximum performance and a long battery life time
- Recharging electronics integrated in the chip, ensuring optimum charging performance
- 2-digit LCD display with battery and reception status indication
- Number of available channels is always the same as the number of channels in use by the system, eliminating the need to scroll through unused channels

These ergonomically designed pocket receivers incorporate the latest electronics technology - including a specially designed IC - to ensure maximum performance and a long battery lifetime. The pocket receivers can be used for both language and music distribution.

Functions

- Audio signal automatically muted when signal is too low, ensuring that the user receives only high quality audio
- Can be used with disposable batteries (2x AA alkaline batteries, not included) or environmentally-friendly NiMH rechargeable battery pack LBB 4550/10, (not included)
- No power used when headphone is disconnected
- Clip for easy wearing
- Measurement mode for easy checking of radiator coverage
- Attractive and stylish design
- Up to 200 hours operation with alkaline batteries
- Up to 75 hours operation with battery pack
- Recharges from empty to full capacity within 1 hour and 45 minutes

Controls and Indicators
- 2-digit LCD display with channel number, battery and reception status indication
- On/off button
- Volume control slide adjuster
- Channel selection up/down buttons
- Charging indicator LED

Interconnections
- 3.5 mm (0.14 in) stereo jack output socket for headphones
- Battery contacts for use with AA alkaline batteries
- Connector for use with LBB 4550/10 battery packs
- Charging contacts on the left-hand side of the pocket receiver for compatibility with LBB 4560 charging units

Technical specifications

Electrical

IR irradiance level	4 mW/m² per carrier
Angle of half sensitivity	± 50°
Headphone output level at 2.4 V	450 mVrms (speech at maximum volume, 32 ohm headphone)
Headphone output frequency range	20 Hz to 20 kHz
Headphone output impedance	32 ohm to 2 kohm
Max. signal-to-noise ratio	80 dB(A)
Supply voltage	1.8 to 3.6 V, nominal 2.4 V
Power consumption at 2.4 V (battery voltage)	15 mA (speech at maximum volume, 32 ohm headphone)
Power consumption (standby)	< 1 mA

Mechanical

Dimensions (H x W x D)	155 x 45 x 30 mm (6.1 x 1.8 x 1.2 in)
Weight	
excluding battery	75 g (0.16 lb)
including battery	125 g (0.27 lb)
Color	Charcoal with silver

Ordering information

LBB 4540/04 Pocket Receiver
Integrus 4-channel pocket receiver.
Order number **LBB4540/04**

LBB 4540/08 Pocket Receivers
Integrus 8-channel pocket receiver.
Order number **LBB4540/08**

LBB 4540/32 Pocket Receiver
Integrus 32-channel pocket receiver.
Order number **LBB4540/32**

Accessories

LBB 4550/10 Integrus NiMH Battery Packs (10 pcs)
Integrus NiMH battery packs for pocket receivers (10 pieces).
Order number **LBB4550/10**

LBB 4550/00 NiMH Battery Pack
Integrus NiMH battery pack for pocket receivers.
Order number **LBB4550/00**

LBB 4560/00 Charging Case
Integrus charging case for pocket receivers, for portable use.
Order number **LBB4560/00**

LBB 4560/50 Charging Cabinet
Integrus charging cabinet for pocket receivers, for fixed installation.
Order number **LBB4650/50**

LBB 4550/00 NiMH Battery Pack

Features

- Temperature sensor for optimal charging process

NiMH battery pack for use with LBB 4540 Pocket Receivers.

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Voltage	2.4 V
Capacity	1100 mAh

Mechanical

Dimensions (H x W x D)	14 x 28 x 49 mm (0.6 x 1.1 x 1.9 in)
Weight	50 g (0.11 lb)

Ordering information

LBB 4550/00 NiMH Battery Pack
Integrus NiMH battery pack for pocket receivers.
Order number **LBB4550/00**

LBB 4550/10 Integrus NiMH Battery Packs (10 pcs)

Features

- Temperature sensor for optimal charging process

NiMH battery pack for use with LBB 4540 Pocket Receivers.

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Voltage	2.4 V
Capacity	1100 mAh

Mechanical

Dimensions (H x W x D)	14 x 28 x 50 mm (0.6 x 1.1 x 1.9 in)
Weight	50 g (0.11 lb)

Ordering information

LBB 4550/10 Integrus NiMH Battery Packs (10 pcs)
Integrus NiMH battery packs for pocket receivers (10 pieces).
Order number **LBB4550/10**

LBB 4560/xx Charging Units

Features

- Can accommodate 56 pocket receivers
- Universal mains power facility allows use world-wide
- Rapid recharging: within 1 hour and 45 minutes

The charging units are used for charging and storing the INT-RXxx Pocket Receivers.

Functions

Controls and Indicators
- On/off switch
- Charging status indication on the pocket receivers

Interconnection
- Mains input with loop-through facility; male and female Euro mains socket
- 56 charging contacts. Compatible with INT-RXxx pocket receivers

Parts included

Quantity	Component
1	LBB 4560 Charging Unit
1	Mains cable

Technical specifications

Electrical

Mains voltage	100-240 Vac, 50-60 Hz
Power consumption	300 W (56 receivers charging)
Power consumption (stand-by)	17 W (no receivers in the charging unit)

Mechanical

Mounting	
LBB 4560/50	Screws and plugs for wall mounting included
Dimensions (H x W x D)	
LBB 4560/00	230 x 690 x 530 mm (9 x 27 x 21 in)
LBB 4560/50	130 x 680 x 520 mm (5 x 27 x 20 in)
Weight excl. receivers	
LBB 4560/00	15.5 kg (34 lb)
LBB 4560/50	11.2 kg (25 lb)
Weight incl. 56 receivers	
LBB 4560/00	22.3 kg (49 lb)
LBB 4560/50	18.0 kg (40 lb)
Color	Charcoal with grey

LBB 4560/50 Charging Cabinet

Ordering information

LBB 4560/00 Charging Case
Integrus charging case for pocket receivers, for portable use.
Order number **LBB4560/00**

LBB 4560/50 Charging Cabinet
Integrus charging cabinet for pocket receivers, for fixed installation.
Order number **LBB4650/50**

LBB 4560/00-US Charging Case (US)
Integrus charging case for pocket receivers, for portable use. US version.
Order number **LBB4560/00-US**

LBB 4560/50-US Charging Cabinet (US)
Integrus charging cabinet for pocket receivers, for fixed installation. US version.
Order number **LBB4560/50-US**

INT-FCRX Storage Case

4

Features

- Robust construction with reinforced corners
- Easy to carry and store
- Shaped foam interior
- Holds up to 100 receivers

This storage case can hold up to 100 INT-RXxx Pocket Receivers.

Technical specifications

Mechanical

Dimensions (H x W x D)	207 x 690 x 530 mm (8 x 27 x 21 in)
Weight	7.5 kg (16.5 lb)
Color	grey

Ordering information

INT-FCRX Storage Case
Integrus storage case for 100 INT-RXxx pocket receivers.
Order number **INT-FCRX**

HDP-LWN Lightweight Neckband Headphone

Features

- Comfortable neckband stereo headphone
- Lightweight with high quality sound reproduction
- Replaceable ear pads
- Right-angled stereo gold-plated jack plug

Functions

Interconnections

- 1.3 m (4.25 ft) cable terminated with gold-plated 3.5 mm (0.14 in) right-angled stereo gold-plated jack plug

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	32 ohm per earpiece
Audio frequency response	20 Hz to 20 kHz (± 3 dB)
Power handling capacity	30 mW
Sensitivity (1 kHz)	111 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	56 g (0.12 lb)
Finish	Charcoal (PH 10736) with silver

Ordering information

HDP-LWN Lightweight Neckband Headphone
Lightweight neckband headphones for high-quality sound reproduction, replaceable ear pads.
Order number **HDP-LWN**

Accessories

HDP-LWNEP Earpads for neckband headphone (50 pairs)
Replacement ear pads for neckband headphones, 50 pairs.
Order number **HDP-LWNEP**

4

LBB 3443 Lightweight Headphones

Features

- Lightweight with high quality sound reproduction
- Replaceable ear pads
- Available with normal or durable cable
- Separate available solid washable ear pads
- Right-angled gold-plated jack plug

Functions

These headphones can be fitted with an optional set of washable ear pads.

Washable ear pads

Interconnections

- 1.3 m (4.25 ft) cable terminated with gold-plated 3.5 mm (0.14 in) angled stereo jack plug

Technical specifications

Electrical

Impedance	32 ohm per earpiece
Audio frequency response	50 Hz to 20 kHz (-10 dB)
Power handling capacity	50 mW
Sensitivity (1 kHz)	98 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	70 g (0.16 lb)
Finish	Charcoal (PH 10736) with silver

Ordering information

LBB 3443/00 Lightweight Headphones
Lightweight headphones for high-quality sound reproduction, replaceable ear pads and normal cable.
Order number **LBB3443/00**

LBB 3443/10 Lightweight Headphones Durable Cable
Lightweight headphones for high-quality sound reproduction, replaceable ear pads and durable cable.
Order number **LBB3443/10**

Accessories

LBB 3443/50 Foam Ear Pads for LBB 3443 (50 pairs)
Replacement foam ear pads for LBB 3443 (50 pairs).
Order number **LBB3443/50**

HDP-LWSP Solid Ear Pads for LBB 3443 (50 pairs)
Replacement, washable solid ear pads for LBB 3443 (50 pairs).
Order number **HDP-LWSP**

LBB 3441/10 Under the Chin Headphones

Features

- Lightweight stereo headphones
- Ergonomic design for use under the chin
- Replaceable ear tips
- Right-angled, gold-plated stereo jack plug

Functions

Interconnections

- 1.2 m (4 ft) cable terminated with 3.5 mm (0.14 in) right-angled gold-plated stereo jack plug.

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	150 ohm per earpiece
Audio frequency response	50 Hz to 5 kHz (-10 dB)
Power handling capacity	60 mW
Sensitivity (1 kHz)	107 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	33 g (0.07 lb)
Color	Black

Ordering information

LBB 3441/10 Under the Chin Headphones
Under the chin headphones with 1.2 m (4 ft) cable, terminated with 3.5 mm (0.14 in) right-angled gold-plated stereo jack plug.
Order number **LBB3441/10**

Accessories

LBB 3441/50 Ear Tips for LBB 3441 (500 pairs)
Replacement ear tips for LBB 3441 (500 pairs).
Order number **LBB3441/50**

LBB 3442/00 Single Earphone

Features

- Lightweight single earphone
- Left or right ear use
- Right-angled gold-plated jack plug

Functions

Interconnections

- 1.2 m (3.94 ft) cable terminated with 3.5 mm (0.14 in) jack plug

Technical specifications

Electrical

Impedance	32 ohm
Audio frequency response	100 Hz to 5 kHz (-10 dB)
Power handling capacity	5 mW
Sensitivity (1 kHz)	114 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	25 g (0.06 lb)
Color	Dark grey

Ordering information

LBB 3442/00 Single Earphone
Lightweight single earphone, 1.2 m (3.94 ft) cable, terminated with 3.5 mm (0.14 in) right-angled mono gold-plated jack plug.
Order number **LBB3442/00**

LBB 3015/04 High Quality Dynamic Headphones

Features

- Durable, dynamic headphones
- Replaceable ear pads
- High-quality sound reproduction
- Gold-plated stereo jack plug

Functions

Interconnections

- 1.5 m (5 ft) cable terminated with a 3.5 mm (0.14 in) stereo jack plug

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	720 ohm per earpiece
Audio frequency response	250 Hz to 13 kHz (-10 dB)
Power handling capacity	200 mW
Sensitivity (1 kHz)	
97 dB SPL/earpiece at 0 dBV/system	
96 dB SPL/earpiece at 1 mW/earpiece	

Mechanical

Weight	110 g (0.24 lb)
Color	Dark grey

Ordering information

LBB 3015/04 High Quality Dynamic Headphones
High quality dynamic headphone.
Order number **LBB3015/04**

Accessories

LBB 9095/50 Ear pads for LBB 3015 LBB 9095 (25 pairs)
Replacement ear pads for LBB 3015 LBB 9095 (25 pairs).
Order number **LBB9095/50**

HDP-ILN Induction Loop Neckband

Features

- Lightweight
- Used with ‘T-coil’ hearing aids
- Gold-plated jack plug

Functions

This induction loop neckband can be used with:
- Integrus receivers
- CCS900 unit
- DCN unit

The neckband magnetically couples the sound signal from the headphone output to a ‘T-coil’ hearing aid.

Interconnections
- 0.9 m (3ft) cable terminated with a 3.5 mm (0.14 in) gold-plated jack plug.

Technical specifications

Mechanical

Weight	45 g (0.10 lb)
Color	Charcoal with silver

Ordering information

HDP-ILN Induction Loop Neckband
Induction loop neckband, lightweight.
Order number **HDP-ILN**

LBB 3222/04 Interpreter Desk

Features

- Accommodates 6 different language channels plus the original floor language
- Incoming channel pre-selector key eliminates the need to manually search through all available language channels
- Quick switching between the floor language and the channel set on the channel selector reduces the chance of operator errors
- Electronic channel interlock function prevents interpreters in different booths from using the same output channel

Functions

- Built-in loudspeaker
- 12 interpreter desks can be loop-through connected within and/or between interpreter booths
- Up to three interpreter desks can be present per booth
- Auto relay enable function allows the interpreter to pro-vide the auto relay language (OR2) for relay interpretation
- The channel B disable function allows the interpreter to disable channel B while ensuring that the desk remains connected to channel A

Controls and Indicators

- Microphone mounted on a flexible stem, complete with a light ring which illuminates when the microphone is on
- Headphone volume, treble and bass controls
- A-B channel selector key with channel select indicators
- Six outgoing B-channel select keys with channel select indicators
- Outgoing ‘OR2’ (auto relay) indicator
- ‘Channel engaged’ indicators to show which channels are in use by other interpreters
- Microphone ‘mute’ key
- Microphone activating key with LED status indicator
- Select key with LED indicators for fast switching between the original floor language and the channel set on the channel selector
- Incoming channel ‘OR2’ (auto relay) indicator to show that the original floor language has been replaced by a transfer interpretation channel, when the auto-relay facility is in operation
- Incoming language channel selector for headphone monitoring
- Call key (voice) to provide two-way communication between interpreter and chairman/operator
- Outgoing message key
- Incoming message indicator
- Rotary switch to preset the outgoing channel via the A output

Interconnections

- 3 m (10 ft) cable terminated with a 25-pin sub D-type connector
- 25-pin sub D-type socket for loop-through connections
- 6.3 mm (0.25 in) stereo jack headphone connectors
- 15-pole 180° DIN-type socket for connection of interpreter’s headset with microphone, plus switch to mute the built-in microphone
- Auxiliary socket (message) for the desk’s message function

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Frequency response	125 Hz (-10 dB) to 12.5 kHz (-2 dB)
Rated equivalent sound pressure due to inherent noise	< 32 dB
Total harmonic distortion at overload	< 5%
Crosstalk attenuation	> 66 dB

Mechanical

Mounting	tabletop or flush mounting
Dimensions (H x W x D)	20-58 x 250 x 189 mm (0.79-2.28 x 9.84 x 7.44 in)
Weight	1.75 kg (3.85 lb)
Color	light grey

Ordering information

LBB 3222/04 Interpreter Desk
Interpreter desk that accommodates 6 different language channels, as well as the original floor language.
Order number **LBB3222/04**

LBB 3306 Extension Cables

Extension cables to interconnect 6-channel interpreter desks when the standard cable is too short.

Functions

Connectors

- 25-pole sub-D type plug with sliding lock mechanism
- 25-pole sub-D type socket with pin lock mechanism

Ordering information

LBB 3306/00 Installation Cable
Extension cable for interconnecting 6-channel interpreter desks when the standard cable is too short, 100 m (328 ft), without connectors.
Order number **LBB3306/00**

LBB 3306/05 Extension Cable
Extension cable for interconnecting 6-channel interpreter desks when the standard cable is too short, 5 m (16.4 ft), 25-pole, sub-D type plug and socket.
Order number **LBB3306/05**

LBB 3306/20 Extension Cable
Extension cable for interconnecting 6-channel interpreter desks when the standard cable is too short, 20 m (65.6 ft), 25-pole sub-D type plug and socket.
Order number **LBB3306/20**

LBB 9095/30 Interpreter Headphones

Features

- Durable and dynamic
- Replaceable ear pads
- High-quality sound reproduction

Lightweight, dynamic headphones for direct connection to DCN-IDESK Interpreters Desk.

Functions

Interconnections

- 2.2 m (7 ft) cable terminated with a 6.3 mm (0.25 in) stereo jack plug

Certifications and approvals

Region	Certification
Europe	CE

Technical specifications

Electrical

Impedance	720 ohm per earpiece
Audio frequency response	250 Hz - 13 kHz (-10 dB)
Power handling capacity	200 mW
Sensitivity (1 kHz)	97 dB SPL/earpiece at 0 dBV/system
	96 dB SPL/earpiece at 1 mW/ earpiece

Mechanical

Weight	125 g (0.28 lb)
Color	Black/grey

Ordering information

LBB 9095/30 Interpreter Headphones
Interpreter headphones, lightweight, dynamic.
Order number **LBB9095/30**

Accessories

LBB 9095/50 Ear pads for LBB 3015 LBB 9095 (25 pairs)
Replacement ear pads for LBB 3015 LBB 9095 (25 pairs).
Order number **LBB9095/50**